hp LaserJet 1150 and hp LaserJet 1300 series

service manual

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Safety Information

WARNING!

Potential Shock Hazard

Always follow basic safety precautions when using this product to reduce risk of injury from fire or electric shock.

1. Read and understand all instructions in the user guide.
2. Observe all warnings and instructions marked on the product.
3. Use only a grounded electrical outlet when connecting the printer to a power source. If you do not know whether the outlet is grounded, check with a qualified electrician.
4. Do not touch the contacts on the end of any of the sockets on the printer. Replace damaged cords immediately.
5. Unplug this product from wall outlets before cleaning.
6. Do not install or use this product near water or when you are wet.
7. Install the product securely on a stable surface.
8. Install the product in a protected location where no one can step on or trip over the power cord and the power cord will not be damaged.
9. If the product does not operate normally, see the online user guide.
10. Refer all servicing questions to qualified personnel.

Information regarding FCC Class B, Parts 15 and 68 requirements can be found in the user guide.

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Introduction

The HP LaserJet 1150 and 1300 series printers are designed to print documents easily with the laser-quality you have come to expect from an HP LaserJet printer.

Hardware description

The printer provides 1200 dot-per-inch (dpi) printing.

The HP LaserJet 1150 prints 18 pages per minute (ppm) on letter-size paper or 17 ppm on A4. The HP LaserJet 1300 prints 20 ppm on letter-size paper or 19 ppm on A4. With 600 x 2 (Fast Res 1200) printing resolution, these printers have exceptional text and graphics print quality. The simple control panel and improved paper handling make this product very easy to use.

The printer's main input tray has a 250-sheet capacity for continuous, multiple-page printing. Manual, single-sheet printing is possible through the priority input tray. Both trays are center-justified for all supported paper sizes. The printer output bin holds up to 125 sheets.

The printer has a very fast first-page-out, at less than 10 seconds. The formatter board contains 8 MB of ROM, 8 MB of RAM, and an embedded 32-bit Coldfire V3 processor. The HP LaserJet 1300 has one DIMM slot available for DIMM expansion (supporting an 8 MB, 16 MB, 32 MB, or 64 MB DIMM).

The printer engine has a 1,000 average (10,000 peak) page-per-month duty cycle. The standard print cartridge life is 2,500 pages, and, for the HP LaserJet 1300 series, the high capacity print cartridge life is 4,000 pages.

The HP LaserJet 1300n printer is network ready with an HP Jetdirect 200m print server included.

Firmware description

The firmware in the printer includes:

- Host-based and PCL 5e printing
- Enhanced PCL 6 with status readback (HP LaserJet 1300 only)
- 80 TrueType™ fonts, plus Cyrillic, Greek, Hebrew, and Arabic
- Pixel placement, mosaic characters
- Memory Enhancement technology (MEt) with hardware compression and decompression

The printer firmware also has Resolution Enhancement technology (REt) and EconoMode functionality.

Product specifications

Table 1. Physical specifications

Category	Specification
Height	253 mm (10 inches)
Depth	486 mm (19.1 inches)
Width	415 mm (16.3 inches)
Weight (cartridge installed)	8.5 kg (18.6 lb)

Table 2. Environmental specifications

Category	Specification
Operating environment (printer plugged into an AC outlet)	• Temperature: 10° to 32.5° C (50° to 90.5° F) • Humidity: 20% to 80% relative humidity (no condensation)
Storage environment (printer not plugged into an AC outlet)	• Temperature: 0° to 40° C (32° to 104° F) • Humidity: 10% to 80% relative humidity (no condensation)

Table 3. Power specifications

Category	Specification
Power requirements	• 110 Vac (± 10%), 60 (± 3) Hz; 127 Vac (± 10%), 60 (± 2) Hz -Or- • 220 Vac (± 10%), 50/60 (± 2) Hz • 240 Vac (± 10%), 50 (± 2) Hz **Note** Power sources are not interchangeable.
Power consumption (during printing)	320 W
Power consumption (idle)	7 W
Power consumption (off)	0 W
Minimum recommended circuit capacity	4.5 A at 115 V 2.4 A at 230 V

Table 4. Performance of HP LaserJet 1150 printer

Category	Specification
Print resolution	1200 dpi
Print speed	18 ppm (Letter) 17 ppm (A4)

Table 5. Performance of HP LaserJet 1300 series printer

Category	Specification
Print resolution	1200 dpi
Print speed	20 ppm (Letter) 19 ppm (A4)

Table 6. Print operating acoustical emissions specifications

Category	Specification
Sound Power Level, L_{WAd} (1 bel = 10 decibels)	6.3 Bels(A)
Sound Pressure Level, L_{pAm} (operator position)	63 dB(A)
Sound Pressure Level, L_{pAm} (bystander position)	63 dB(A)

Table 7. Skew specifications

Category	Specification
Print skew—left	0.8% (2 mm over 250 mm in length) for cut-sheet media) 1.5% (3.3 mm over 220 mm in length) for cut-sheet media 0.87 (1.65 mm over 190 mm in width) for cut-sheet media
Print skew—right	1.5% (3.3 mm over 220 mm in width) for envelopes, postcards, A5, and cut-sheet media
Cut-sheet leading edge skew	0.87% (1.6 mm over 190 mm in width)

Model and serial numbers

The model number and serial number are listed on an identification label located on the inside of the print cartridge door. The serial number contains information about the country/region of origin, revision level, production code, and production number of the printer. The label also contains power rating and regulatory information.

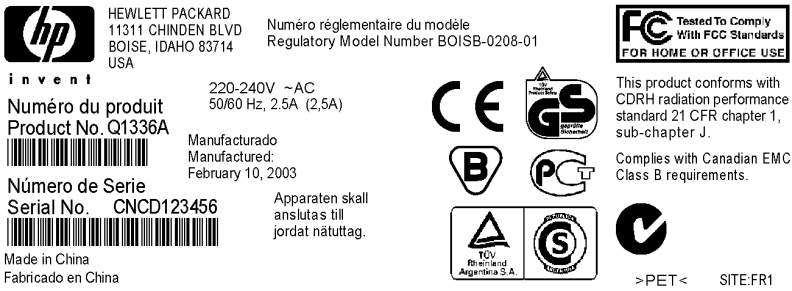

Figure 1. **HP LaserJet 1150 printer label (220 volt)**

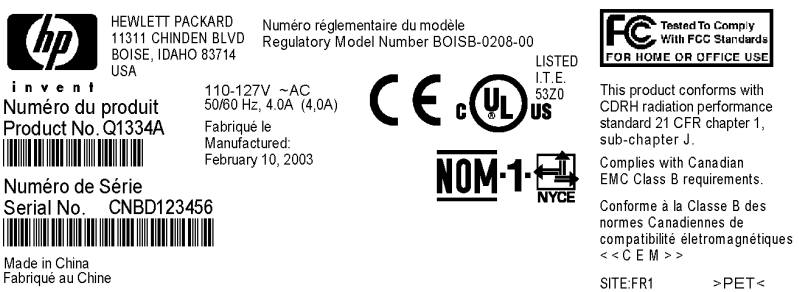

Figure 2. **HP LaserJet 1300 printer label (110 volt)**

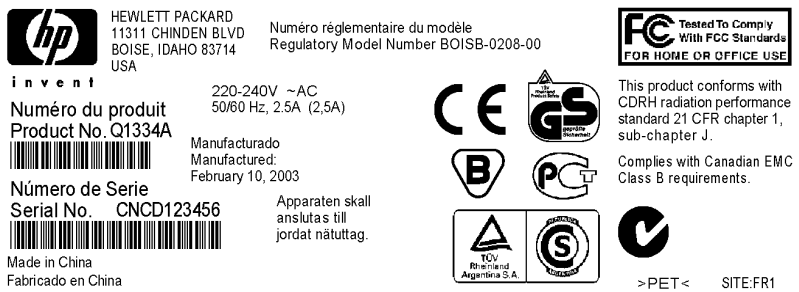

Figure 3. **HP LaserJet 1300 printer label (220 volt)**

Overview of printer

Front and side view

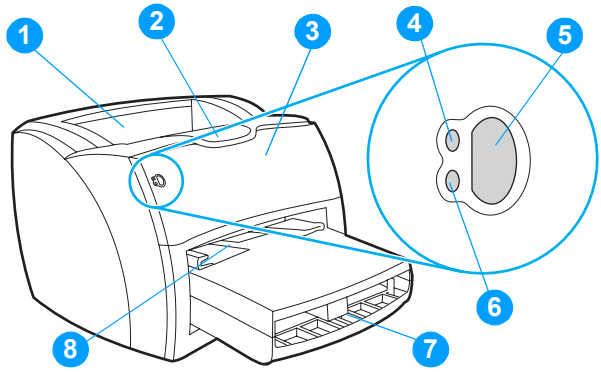

Figure 4. **Front and side view**

1 Printer output bin

2 Long media extension

3 Print cartridge door

4 Ready light

5 Go button and light

6 Attention light

7 Main input tray

8 Priority input tray

Back and side view

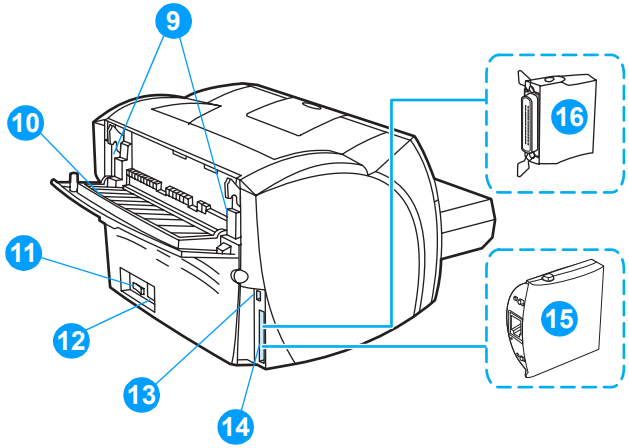

Figure 5. **Back and side view**

9 Fuser pressure release levers

10 Straight-through output door

11 On/off switch

12 Power receptacle

13 USB port

14 Parallel port (HP LaserJet 1150 printer)
LIO connectivity slot (HP LaserJet 1300 series)

15 HP Jetdirect print server (HP LaserJet 1300n printer only)

16 Parallel LIO adaptor (HP LaserJet 1300 series)

Warranty statement

DURATION OF WARRANTY: One year from date of purchase.

1 HP warrants to you, the end-user customer, that HP hardware, accessories, and supplies, will be free from defects in materials and workmanship after the date of purchase, for the period specified above. If HP receives notice of such defects during the warranty period, HP will, at its option, either repair or replace products which prove to be defective. Replacement products may be either new or like-new.

2 HP warrants to you that HP software will not fail to execute its programming instructions after the date of purchase, for the period specified above, due to defects in material and workmanship when properly installed and used. If HP receives notice of such defects during the warranty period, HP will replace software media which does not execute its programming instructions due to such defects.

3 HP does not warrant that the operation of HP products will be uninterrupted or error free. If HP is unable, within a reasonable time, to repair or replace any product to a condition as warranted, you will be entitled to a refund of the purchase price upon prompt return of the product.

4 HP products may contain remanufactured parts equivalent to new in performance or may have been subject to incidental use.

5 Warranty does not apply to defects resulting from (a) improper or inadequate maintenance or calibration, (b) software, interfacing, parts, or supplies not supplied by HP, (c) unauthorized modification or misuse, (d) operation outside of the published environmental specifications for the product, or (d) improper site preparation or maintenance.

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Extended warranty

For the latest information on HP SupportPack options available for the HP LaserJet 1150 and 1300 series printers, see http://lookup.supportpack.hp.com. You will need the HP hardware product number for the product. See table 8 for these product numbers.

Table 8. HP hardware product numbers

Product	Product number
HP LaserJet 1150	Q1336A
HP LaserJet 1300	Q1334A
HP LaserJet 1300n	Q1335A
Optional 250-sheet paper feeder for the HP LaserJet 1300 series	Q2485A

Limited warranty for print cartridge life

This HP print cartridge is warranted to be free from defects in materials and workmanship for cartridge life (until the HP toner is depleted).

Your HP toner is depleted when you begin to see faded or light type on your printed page. HP will, at HP's option, either replace products which prove to be defective or refund your purchase price.

The warranty does not cover cartridges which have been refilled, are emptied, abused, misused, or tampered with in any way.

This limited warranty gives you specific legal rights. You may have other rights which vary from state to state, province to province, and country/region to country/region.

To the extent allowed by applicable law, in no event shall Hewlett-Packard Company be liable for any incidental, consequential, special, indirect, punitive, or exemplary damages or lost profits from any breach of this warranty or otherwise.

In the event that your product proves to be defective, please return it to place of purchase with a written description of the problem.

Print cartridge information

The print cartridge is designed to simplify replacement of the major consumable parts. The print cartridge contains the printing mechanism and a supply of toner.

At five percent page coverage, the standard print cartridge for the HP LaserJet 1150 and 1300 printers will print approximately 2,500 pages. The actual page yield obtained by a customer depends upon factors such as the percentage of coverage on the pages printed, toner density setting, EconoMode, and environmental conditions (temperature and humidity).

Print cartridge date stamp

Some HP LaserJet print cartridge packages are stamped with an alphanumeric date code. This code represents a 30-month period beyond the date of production in order to facilitate efficient inventory

management processes between HP and its resellers. It does not serve as an indication of toner life or relate in any way to warranty terms and conditions.

Refilled print cartridges

While Hewlett-Packard does not prohibit the use of refilled print cartridges during the warranty period or while the printer is under a maintenance contract, it is not recommended for the following reasons:

- Repairs resulting from the use of refilled print cartridges are not covered under Hewlett-Packard warranty or maintenance contracts.
- Hewlett-Packard has no control or process to ensure that a refilled print cartridge functions at the high level of reliability of a new HP LaserJet print cartridge. Hewlett-Packard also cannot predict the long term reliability effect on the printer from using different toner formulations found in refilled cartridges.
- The print quality of HP LaserJet print cartridges influences the customer's perception of the printer. Hewlett-Packard has no control over the actual print quality of a refilled print cartridge.

HP LaserJet printing supplies

In many countries/regions, this product's printing supplies (such as print cartridge, drum, and fuser) can be returned to Hewlett-Packard through the HP printing supplies returns and recycling program. This easy-to-use, free takeback program is available in over 48 countries/regions. Multilingual program information and instructions are included in every new HP print cartridge and consumables package.

HP printing supplies returns and recycling program information

Since 1990, the HP printing supplies returns and recycling program has collected millions of used print cartridges that otherwise might have been discarded in the world's landfills. The HP LaserJet print cartridges and consumables are collected and bulk-shipped to our resource and recovery partners who disassemble the print cartridge. After a thorough quality inspection, selected parts are reclaimed for use in new print cartridges. Remaining materials are separated and converted into raw materials for use by other industries to make a variety of useful products.

U.S. recycling returns

For a more environmentally responsible return of used print cartridges and consumables, Hewlett-Packard encourages you to use bulk returns. Simply bundle two or more print cartridges together and use the single, prepaid, pre-addressed label that is supplied in the package. For more information in the U.S., call (800) 340-2445 or visit the HP LaserJet supplies Web site at http://www.hp.com/recycle.

Non-U.S. recycling returns

Non-U.S. customers should call the local HP sales and service office or visit the http://www.hp.com/recycle website more information regarding availability of the HP printing supplies returns and recycle program.

For more information

For more information on the following HP environmental programs, see http://www.hp.com/go/environment.

- Product environmental profile sheet for this and many related HP products
- HP's commitment to the environment
- HP's environmental management system
- HP's end-of-life product return and recycling program
- Material safety data sheets

Material safety data sheet

Material safety data sheets (MSDS) can be obtained by contacting the HP LaserJet supplies website at http://www.hp.com/go/msds.

2 Installation and operation

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Operating environment

Place the printer on a sturdy, level surface in a well-ventilated, dust-free area that meets the following environmental requirements:

- temperature: 10° to 32.5° C (50° to 90.5° F)
- humidity: 20% to 80% relative humidity (no condensation)
- away from direct sunlight, open flames, and ammonia fumes
- sufficient space around the printer to allow for proper access and ventilation

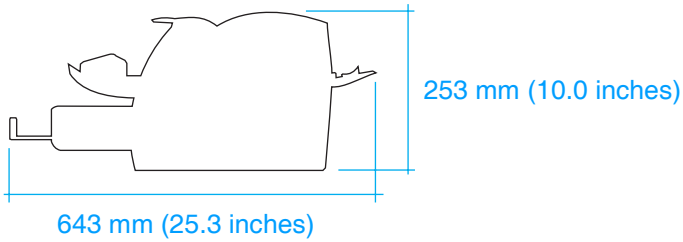


Figure 6. **Dimensions of printer**

Identifying printer components

Printer control panel

The printer control panel has two lights and one lighted button. These lights produce patterns that identify the printer status.

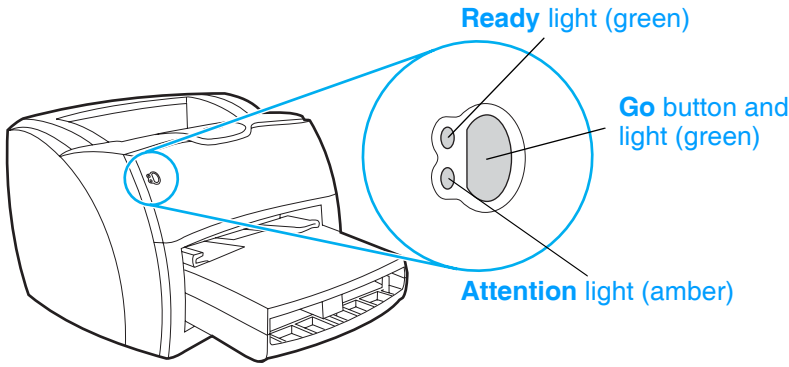


Figure 7. **Printer control panel**

- Go **button and light—**Prints demo pages. (To print a demo page or to continue printing while in manual feed mode, press and release the Go button.)
- **Ready light—**Indicates that the printer is ready to print.
- **Attention light—**Indicates that the main input tray is empty, print cartridge door is open, print cartridge is missing, or other errors.

Control panel light patterns

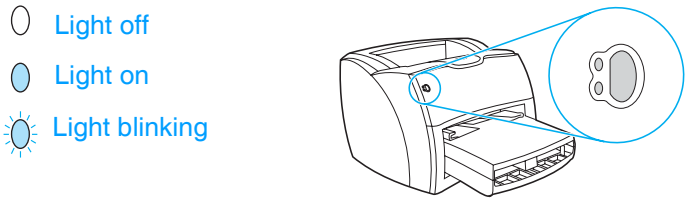


Figure 8. **Light status legend**

Note For detailed information on solving problems indicated by control panel lights, see “Errors” on page 142.

Table 9. Control panel light messages

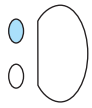
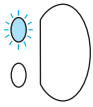
Light status	Condition of the printer	Action
	**Ready** The printer is ready to print.	No action is necessary. To print a demo page, press and release the GO button on the printer control panel.
	**Processing** The printer is receiving or processing data.	Wait for the job to print.

Table 9. Control panel light messages (continued)

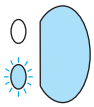
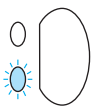
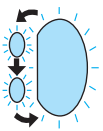
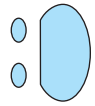
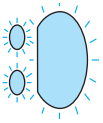
Light status	Condition of the printer	Action
	**Manual feed or out of memory** The printer is in manual feed mode or out of memory. You can continue printing.	Make sure that you have loaded the correct media. To continue printing, press and release the GO button. The software controls manual feed. If you do not want the printer to be in manual feed mode, change the setting from the printer properties. See the printer software for more information. The page being printed might be too complex for the printer memory capacity. • To continue printing, press and release the GO button. • Reduce the resolution. See the user guide for more information. • Add more memory. See the user guide for more information.
	**Door open, media out, no print cartridge, or paper jam** The printer is in an error state that requires operator intervention or help.	• Make sure that the print cartridge door is completely closed. • Make sure that the media is loaded correctly. See the user guide for instructions. • Make sure that the print cartridge is correctly installed in the printer. See the user guide for instructions. • If the printer still has an error, there is a paper jam. See the user guide for instructions.
	**Printer Initialization/Cancel Job/Cleaning Mode** A printer initialization is taking place. If all lights blink for half of a second or longer in a sequence: • the printer is initializing • all previously sent print jobs are being purged • a cleaning page is being printed	No action is necessary.

Table 9. Control panel light messages (continued)

Light status	Condition of the printer	Action
	**Fatal error** All lights are on.	• Turn the printer off and then back on. • Unplug the printer for five minutes, and then plug it back in. • If the printer still has an error, see chapter 6, “Troubleshooting.”
	**Accessory error** All lights are blinking. (HP LaserJet 1300 series only)	• Remove the DIMMs and reseat. See the user guide for instructions. • If the printer still has an error, replace the DIMMs.

Selecting media

You can use paper with up to 100 percent recycled fiber content if it meets specifications. For more information about media specifications, see the HP LaserJet printer family print media guide. This guide is available in .pdf format online at http://www.hp.com/support/ljpaperguide. To order HP paper, see the user guide.

Highly textured stock might not print evenly. Very glossy paper might jam or repel toner. Multipart forms can wrinkle or get jammed in the printer. And paper in poor condition, such as paper with tears, wrinkles, or bent edges, can jam.

Do not use envelopes that have a very slick finish, ones that have self-stick adhesives, or those with clasps or windows. Also do not use envelopes with thick, irregular, or curled edges, or areas that are wrinkled, torn, or otherwise damaged.

Use a sturdy envelope of approximately 60 to 90 g/m^2 (16 to 24 lb) weight. Use tightly constructed envelopes, and make sure that the folds are sharply creased.

The main input tray can hold up to 250 sheets of 75 g/m^2 (20 lb) print media. The priority input tray can hold up to 10 sheets, one envelope, or one piece of heavy media. Both can be adjusted to hold media measuring from 76.2 by 127 mm (3 by 5 inches) to 216 by 356 mm (8.5 by 14 inches). This includes, but is not limited to, the following paper and envelope sizes:

Table 10. Media types

Paper type	Metric	English
Letter	216 by 279 mm	8.5 by 11 in
Legal	216 by 356 mm	8.5 by 14 inches
Executive	184 by 267 mm	7.25 by 10.5 inches
A4	210 by 297 mm	8.25 by 11.75 inches
COM10 Envelopes	105 by 241 mm	4.13 by 9.5 inches
DL Envelopes	110 by 220 mm	4.33 by 8.67 inches
C5 Envelopes	162 by 229 mm	6.4 by 9 inches
B5 Envelopes	176 by 250 mm	6.9 by 9.85 inches
Monarch Envelopes	98.5 by 191 mm	3.88 by 7.5 inches
Custom-sized media	custom	custom

Note Narrow and heavy media can cause the printer to print slower.

Loading media

Main input tray

The main input tray holds up to 250 sheets of 75 g/m^2 (20 lb) paper, 30 envelopes, or a 25 mm (0.98 inches) stack of heavier media. Load media with the top forward and the side to be printed facing up. To prevent jams and skew, always adjust the side media guides.

Priority input tray

The priority input tray holds up to ten pages of 75 g/m^2 (20 lb) paper or one envelope, transparency, or card. Load media with the top forward and the side to be printed facing up. To prevent jams and skew, always adjust the side media guides.

CAUTION If you try to print on media that is wrinkled, folded, or damaged in any way, a jam might occur. See the user guide for more information.

Note When you add new media, make sure that you remove all of the media from the input tray and straighten the stack of new media. This helps prevent multiple sheets of media from feeding through the printer at one time, reducing jams.

Specific types of media

- **Transparencies and labels:** Load transparencies and labels with the top forward and the side to be printed facing up. See the user guide for more information.
- **Envelopes:** Load envelopes with the narrow, stamp side forward and the side to be printed facing up. See the user guide for more information.
- **Letterhead or preprinted forms:** Load with the top forward and the side to be printed facing up. See the user guide for more information.
- **Cards and custom-sized media:** Load with the narrow side forward and the side to be printed facing up. See the user guide for more information.

Printer output paths

Output bin

The output bin is located on the top of the printer. Printed media is collected here in the correct sequence when the straight-through output door is closed. Use the output bin when printing normal and large, collated documents.

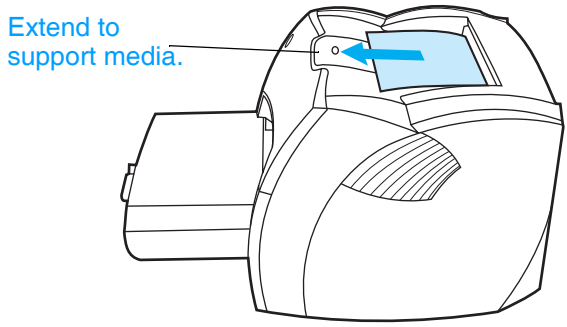


Figure 9. **Output bin**

Straight-through output path

The straight-through output path is useful when you are printing envelopes, transparencies, heavy media, or any media that tends to curl when printed. Printed media exits in reverse order when the straight-through output door is open.

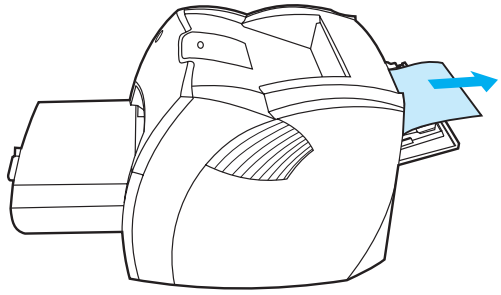


Figure 10. **Straight-through output door**

Note Printed media does not stack when you use the straight-through output path. The media drops to the surface below unless you remove each sheet as it exits the printer.

3 Maintenance

Chapter contents

Life expectancies of components 38
User-replaceable parts 38
Replacing the printer pickup roller 39
Replacing the printer separation pad 42
Cleaning the equipment 45
Cleaning the print path 46
Cleaning the print cartridge area 47
Cleaning the printer pickup roller 49
Cleaning the printer separation pad 50

Life expectancies of components

Inspect components when servicing the printer. Replace components as needed, based on failure or wear, rather than on usage.

The following table lists approximate schedules for replacing components.

Table 11. Life expectancies of components

Description	Part number	Estimated life (pages)	Remarks
HP LaserJet 1150 print cartridge (user replaceable)	Q2624A	2,500	When print becomes faint, redistribute toner in the cartridge by gently shaking the cartridge from side to side.
HP LaserJet 1300 print cartridge (user replaceable)	Q2613A	2,500	When print becomes faint, redistribute toner in the cartridge by gently shaking the cartridge from side to side.
	Q2613X	4,000	
Printer transfer roller	RM1-0545-000CN	50,000	Can affect print quality and/or paper movement.
Printer pickup roller	RL1-0303-000CN	50,000	Look for glazing and/or cracks.
Printer separation pad	RF0-1014-000CN	50,000	Can affect paper movement.
Fuser assembly (100-127 V)	RM1-0535-000CN	50,000	Can affect print quality and paper movement.
Fuser assembly (220-240 V)	RM1-0536-000CN	50,000	Can affect print quality and paper movement.

* The estimated print cartridge life is based on letter- or A4-sized paper with an average of five percent toner coverage and a medium density setting. Print cartridge life can be extended further by conserving toner using the EconoMode setting. However, HP does not recommend full-time use of EconoMode. If EconoMode is used full-time when the average toner coverage is significantly less than five percent, it is possible that the toner supply will outlast the mechanical parts in the print cartridge.

User-replaceable parts

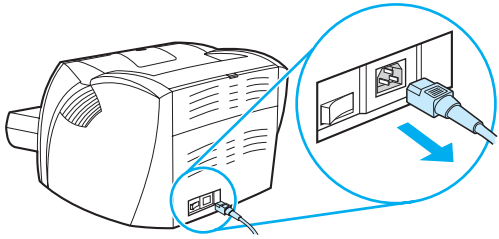
Replace the printer pickup roller and the printer separation pad when the parts are near the end of their life expectancies or if media frequently misfeeds.

Replacing the printer pickup roller

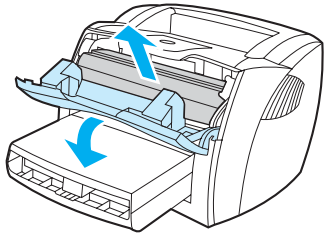
If the printer regularly misfeeds (no media feeds through), you might have to replace or clean the pickup roller.

CAUTION Failure to complete this procedure might damage the printer.

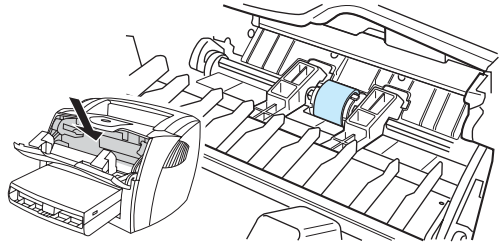
1 Unplug the power cord from the printer, and allow the printer to cool.



2 Open the print cartridge door, and remove the print cartridge.

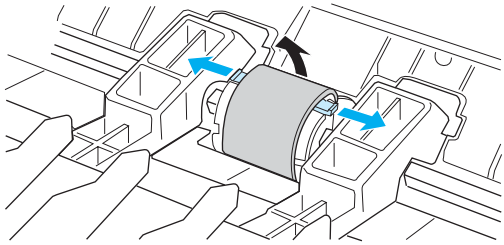


3 Locate the pickup roller.

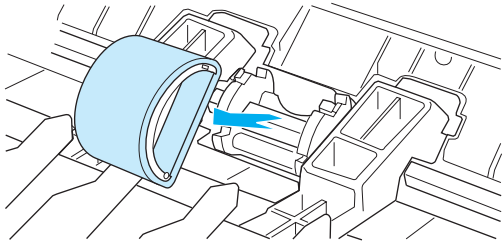


4 Release the small tabs on each side of the pickup roller by pushing them away from the roller, and then rotate the pickup roller toward the front.

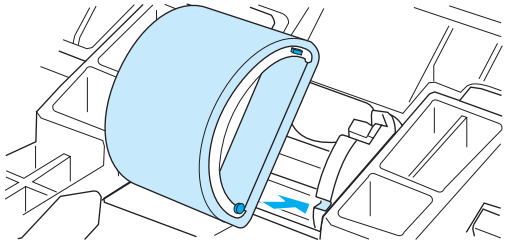
CAUTION The tabs are fragile. Be careful not to break them.



5 Gently pull the pickup roller up and out.



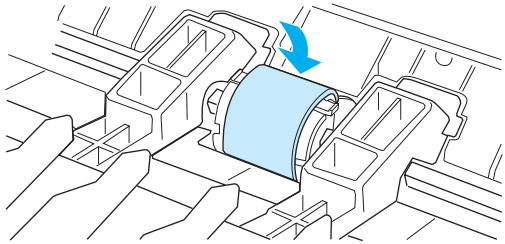
6 Position the new pickup roller in the slot of the previous pickup roller.



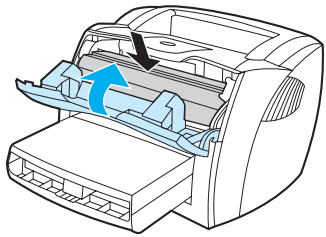
Note Circular and rectangular pegs on each side prevent you from incorrectly positioning the pickup roller.

7 Rotate the top of the new pickup roller into position until the tabs on each side of the roller snap the roller into place.

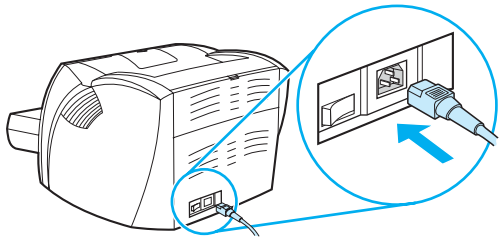
CAUTION The tabs are fragile. Be careful not to break them.



8 Reinstall the print cartridge, and close the print cartridge door.



9 Plug the printer in and turn it back on.



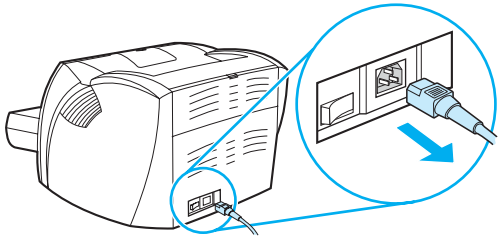
Replacing the printer separation pad

Note Before you change the separation pad, clean the pickup roller. See “Cleaning the printer pickup roller” on page 49 for instructions.

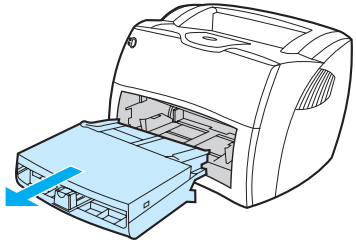
If the input tray feeds more than one page at a time, you might have to replace the printer separation pad. Recurring feed problems indicate that the printer separation pad is worn.

CAUTION During this procedure, be careful not to break the tabs on the separation pad.

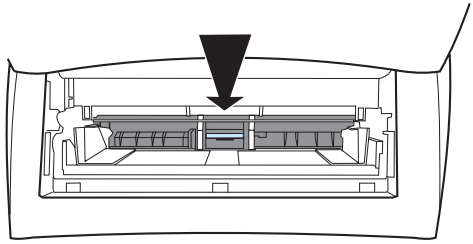
1 Unplug the power cord from the printer, and allow the printer to cool.



2 Remove the input trays.

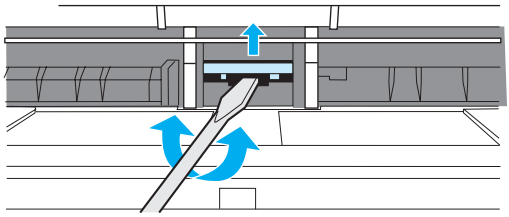


3 Locate the blue separation pad. (For the HP LaserJet 1300 series, you might need to push down the media lift plate to see the separation pad.)

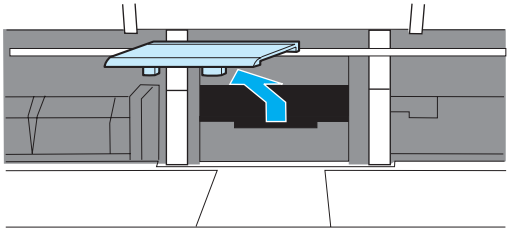


4 To pry the separation pad up from the spring-loaded base, insert a flat-edged screwdriver in the slot under the separation pad and twist until the tabs are free.

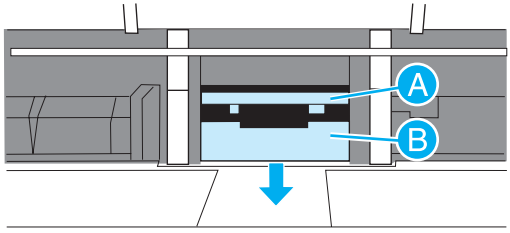
CAUTION The tabs are fragile. Be careful not to break them.



5 Reach in through the input tray opening, push the spring-loaded base down with one hand, and pull the separation pad up with the other hand.

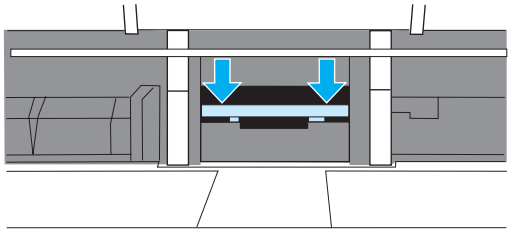


6 With one hand, position the new separation pad in the slot of the previous separation pad (A). With the other hand, reach through the input tray opening, and push the spring-loaded base down (B).



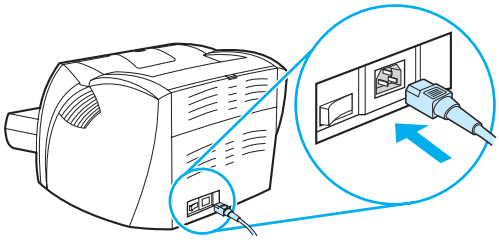
Note The tab on the right is larger to help you position the separation pad correctly.

7 Snap both sides of the separation pad firmly into place.



CAUTION Make sure that the separation pad is straight and that there is no space between the separation pad and the spring-loaded base. If the separation pad is not straight or you see space on one side, remove the separation pad, make sure that the larger tab is on the right, reinsert the separation pad, and snap both sides into place.

8 Reinstall the input trays, and then plug the printer in and turn it back on.



Cleaning the equipment

WARNING! Before you perform these steps, unplug the printer to avoid shock hazard.

To maintain quality, thoroughly clean the printer:

- Any time a new print cartridge is installed.
- After printing approximately 2,500 pages.
- Whenever print quality problems appear.

Clean the outside of the printer with a water-dampened cloth. Clean the inside with only a dry, lint-free cloth (such as a lens tissue).

To avoid permanent damage to the print cartridge, do not use ammonia-based cleaners on or around the printer.

WARNING! Avoid touching the heating element in the fuser. It might be very hot and can cause burns.

CAUTION Do not touch the surface of the black sponge transfer roller. Contaminants on the roller can cause print quality problems.

Cleaning the print path

Use this process if you discover toner specks or dots on printouts. This process produces a transparency with toner debris, which should be discarded.

Note

This process requires a transparency to remove dust and toner from the print paper path. Do not use bond or rough paper.

Make sure the transparency you use meets media requirements for the printer.

If transparency film is unavailable, you can use paper. If you must use paper, perform the procedure two or three times to ensure proper cleaning.

1. Load a transparency in the priority input tray.
2. Make sure that the printer is in the Ready state.
3. Press and hold the Go button for 10 seconds. The transparency feeds through the printer slowly. Discard the transparency.

Note

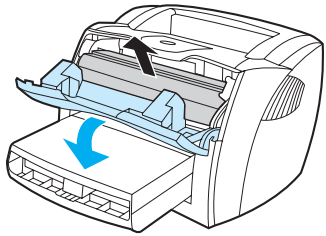
After you press and hold the Go button, the three printer lights blink until the cleaning process is complete.

Cleaning the print cartridge area

Cleaning the print cartridge area can improve the quality of your printed sheets.

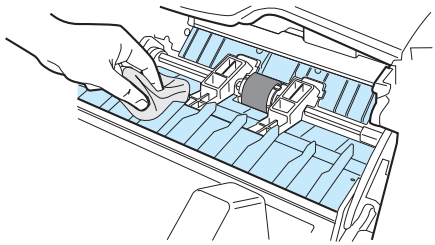
WARNING! Before cleaning the printer, disconnect it from the power source and wait for the printer to cool.

1 Open the print cartridge door, and remove the print cartridge.



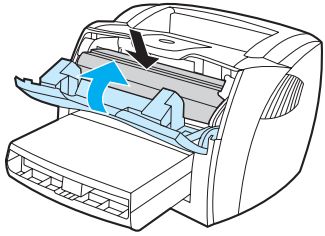
CAUTION To prevent damage, do not expose the print cartridge to light. Cover the print cartridge if necessary. Also, do not touch the black sponge transfer roller inside the printer. Touching it can reduce the print quality of output.

2 Wipe the media path area and the print cartridge cavity with a dry, lint-free cloth.

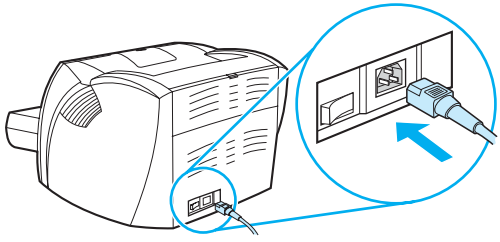


Note Use only a dry, lint-free cloth to remove dust and toner. Using a vacuum or other device to clean inside the product can damage it.

3 Replace the print cartridge, and close the print cartridge door.



4 Plug the power cord back into the printer.

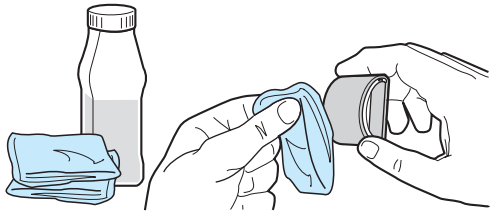


Cleaning the printer pickup roller

If you want to clean the pickup roller rather than replace it, follow the instructions below.

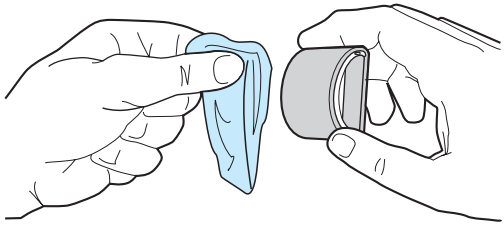
Remove the pickup roller as described in steps 1 through 5 of “Replacing the printer pickup roller” on page 39.

1 Dampen a lint-free cloth in isopropyl alcohol, and scrub the roller.

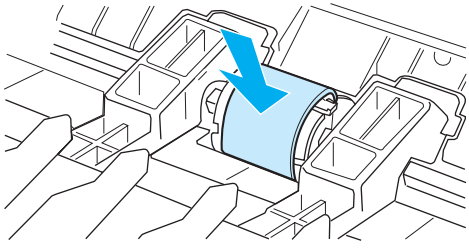


WARNING! Alcohol is flammable. Keep the alcohol and cloth away from an open flame. Before you close the printer and plug in the power cord, allow the alcohol to dry completely.

2 Using a dry, lint-free cloth, wipe the pickup roller to remove loosened dirt.



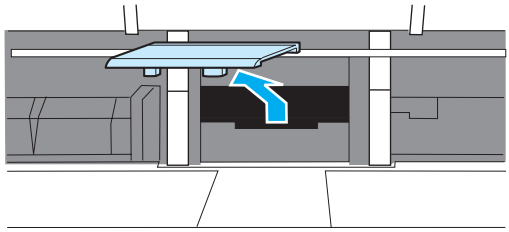
3 Allow the pickup roller to dry completely before you reinstall it in the printer. To reinstall the pickup roller, see steps 6 through 9 of “Replacing the printer pickup roller” on page 39.



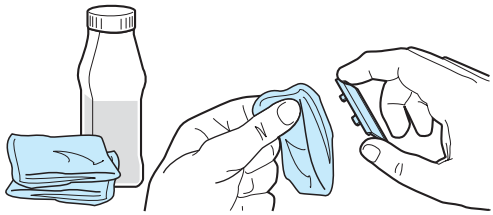
Cleaning the printer separation pad

If you want to clean the separation pad rather than replace it, follow the instructions below.

1 Remove the separation pad as described in steps 1 through 5 of “Replacing the printer separation pad” on page 42.

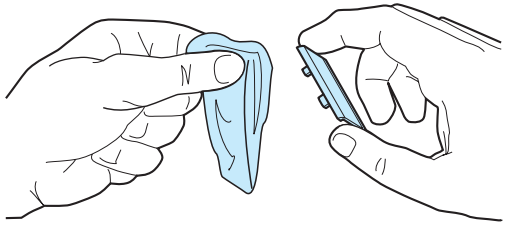


2 Dab a lint-free cloth in isopropyl alcohol, and scrub the pad.

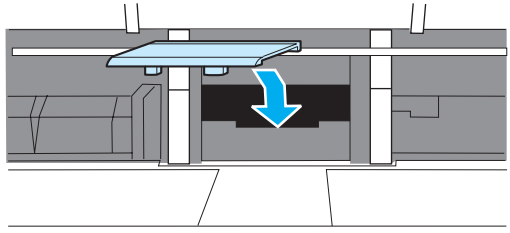


WARNING! Alcohol is flammable. Keep the alcohol and cloth away from an open flame. Before you close the printer and plug in the power cord, allow the alcohol to dry completely.

3 Using a dry, lint-free cloth, wipe the pad to remove the loosened dirt.



4 Allow the pad to dry completely before you reinstall it in the printer. To reinstall the pad, see steps 6 through 8 of “Replacing the printer separation pad” on page 42.



4 Operational overview

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Basic functions

This chapter presents a functional overview of the printer's processes. The following systems are discussed:

- formatter
- printer functions
  - engine control unit (ECU) system/power system
  - image formation system
  - paper-feed system (printer)

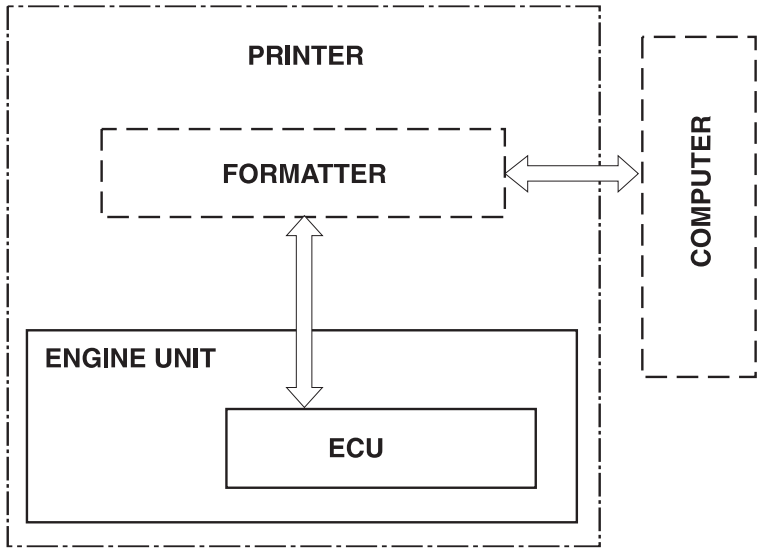

Figure 11. **Basic configuration**

Formatter system

The formatter is responsible for the following:

- receiving and processing print data from the printer interface
- monitoring the control panel and relaying printer status information
- developing and coordinating data placement and timing with the print engine
- communicating with the host computer through the bidirectional interface

The formatter receives print data from the parallel interface, the Low-cost Input/Output (LIO) interface (supports an HP Jetdirect print server or a Bluetooth wireless adaptor), or the Universal Serial Bus (USB) interface and converts it into a dot image. The ECU synchronizes the image formation system with the paper-feed system and signals the formatter to send the print image data. The formatter sends the print image data (dots) in the form of a video signal, and the printing process begins.

Central processing unit

The formatter incorporates an embedded Coldfire V3 microprocessor operating at 132 MHz.

RAM

- One bank of Non-Volatile RAM (NVRAM) stores parameters.
- Dynamic random access memory (DRAM) provides temporary storage of print data.

Parallel, LIO, or USB interface

The formatter receives incoming data through its bidirectional parallel, LIO, or USB interface. This interface provides high-speed, two-way communication between the printer and the host, allowing you to change printer settings and monitor printer status from the host computer.

Control panel

The control panel consists of the following elements:

- three front panel status lights (one contained in the Go button)
- Go button

EconoMode

Depending on which printer driver is used, selecting EconoMode from the printer driver allows the printer to use approximately fifty percent less toner, extending the life of the print cartridge.

MEt

HP MEt effectively doubles the standard memory through a variety of font and data-compression methods.

Enhanced I/O

The Enhanced I/O feature allows printer memory to be used for storing data received from the host computer. When Enhanced I/O is enabled, you can send more data to the printer in shorter amounts of time, which allows you to return to your application sooner. Enhanced I/O has the following options:

- **Auto**—allows the printer to use Enhanced I/O memory allocation to increase the speed of data transfer from the host computer to the printer, if necessary. The default setting is Auto.
- **Off**—uses the minimum amount of printer memory for storing data sent from the host computer.
- **Page Protect**—allows the formatter to create the entire page image in page buffer memory before physically moving the media through the printer. This process ensures that the entire page will be printed. The default setting is Auto.

  Page complexity (ruling lines, complex graphics, or dense text) can exceed the printer's ability to create the page image fast enough to keep pace with the image formation process. If Page Protect is disabled and a page is too complex, the page might print in parts (for example, the top half on one page and the bottom half on the next page). Some print-data loss is likely in these instances, and the printer will display an error message.

PJL overview

Printer Job Language (PJL) is an integral part of configuration, in addition to the standard Printer Command Language (PCL). With standard cabling, PJL allows the printer to perform functions such as:

- **Two-way communication** with the host computer through a bidirectional parallel or LIO connection. The printer can tell the host such things as the control panel status.
- **Isolation of print environment settings** from one print job to the next. For example, if a print job is sent to the printer in landscape mode, the subsequent print jobs print in landscape only if they are formatted for landscape printing.

Note PJL commands can be sent to the printer only from a DOS command prompt and through a parallel cable. DOS applications are not supported over a USB interface.

Printer functions

Printer functions are divided into five groups:

- engine control
- formatter
- image formation
- laser/scanner
- pickup and feed

The following figure is a block diagram of the printer unit:

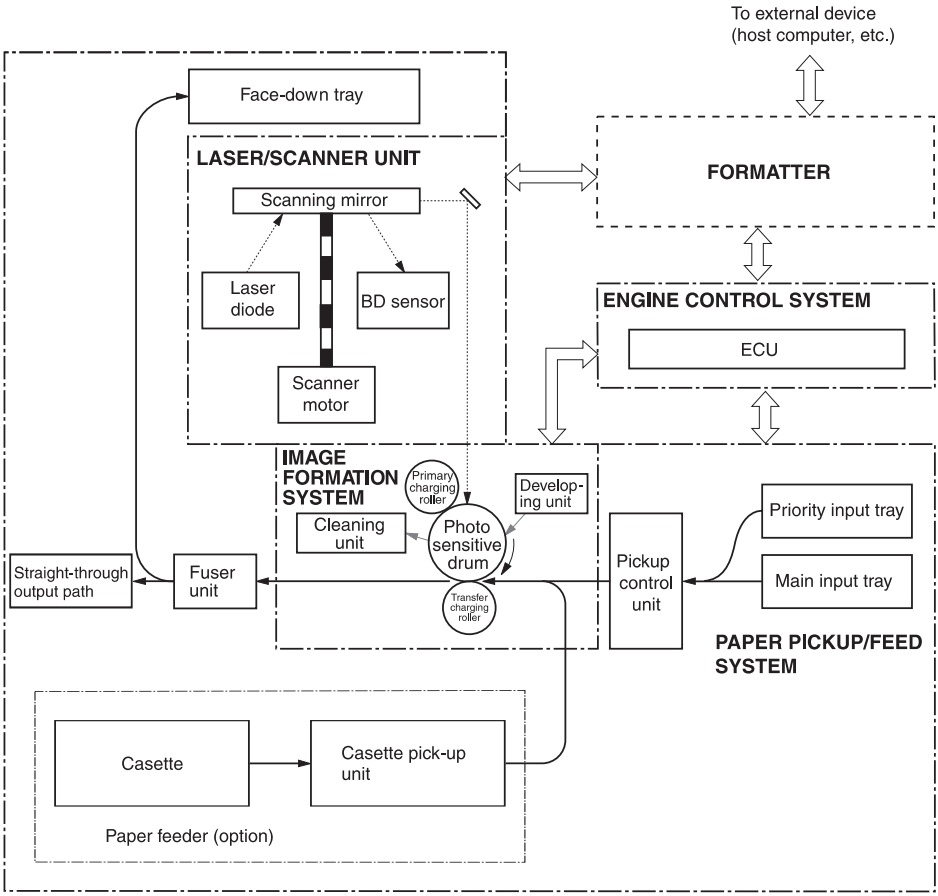

Figure 12. **Printer unit functional block diagram**

Engine control unit/power system

The engine control unit (ECU) coordinates all print engine activities, drives the laser, and coordinates print data from the formatter with the image formation process. The ECU also includes power supply and distribution circuitry.

Note

In several other HP LaserJet products, the ECU is also known as the controller PCA or the DC controller PCA.

The ECU controls the following systems and functions:

- **Printer engine control**
  - paper motion monitoring and control (printing)
  - motor
- **Printer laser/scanner**
- **Power system**
  - AC power distribution
  - DC power distribution
  - overcurrent/overvoltage protection
  - high-voltage power distribution

The following figure shows the various ECU loads:

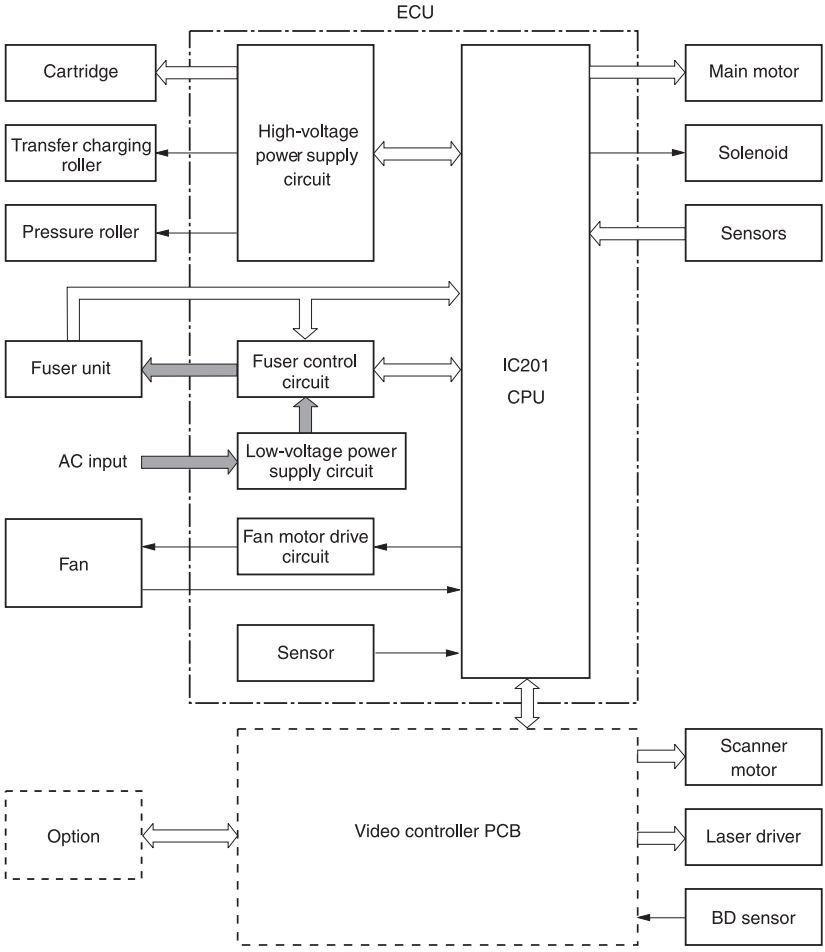

Figure 13. ECU loads

Printer engine control system

Paper motion monitoring and control

The ECU controls paper motion in the printer by continuously monitoring the various paper sensors and coordinating the timing with the other print processes.

For a detailed explanation of paper movement and the interaction of the photosensors and solenoid with the paper movement process, see “Printer paper-feed system” on page 67.

Motor

The motor is controlled by the ECU. The motor provides all of the printer paper movement.

Printer laser/scanner drive

The ECU sends signals to the laser/scanner assembly to modulate the laser diode “on” and “off” and to drive the laser/scanner motor.

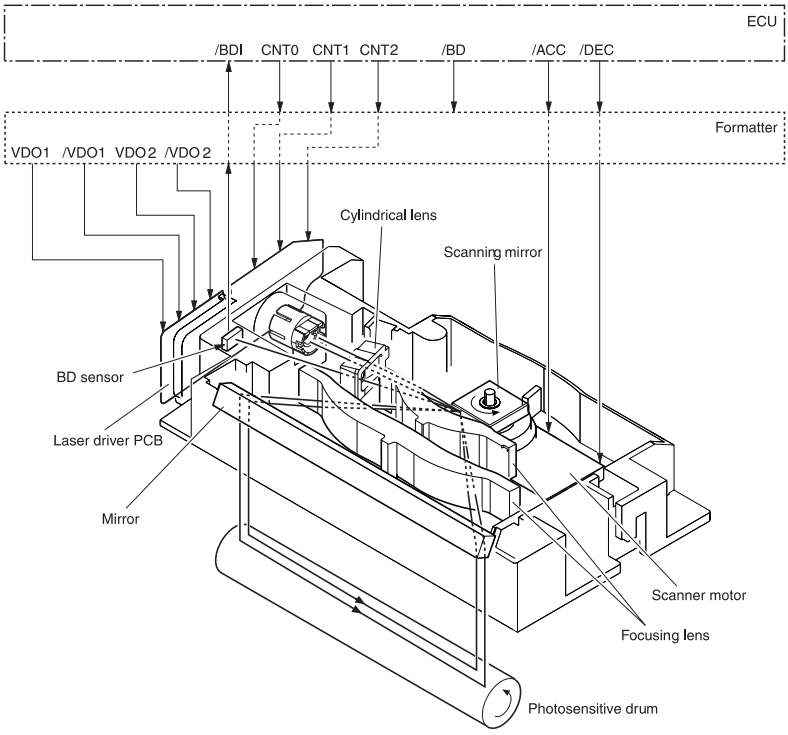

Figure 14. Overview of laser/scanner operation

Power system on ECU

The AC, DC, and high-voltage power supply circuits are all contained within the ECU.

AC power distribution

The AC power circuitry supplies AC voltage whenever the power cord is connected to the AC power source. AC voltage is distributed to the DC power supply circuitry and to the AC driver circuitry, which controls AC voltage to the fuser assembly heating element.

DC power distribution

The DC power distribution circuitry, located on the ECU, distributes +3.3 Vdc, +5 Vdc, and +24 Vdc as follows:

- +3.3 Vdc:
  - Formatter
  - Laser/beam detect circuitry ECU
  - Photosensors
- +5 Vdc:
  - Formatter
  - ECU
  - Laser/beam detect circuitry
- +24 Vdc:
  - Motor
  - Exhaust fan
  - Laser/scanner motor
  - Document scanner motor
  - Solenoid
  - Formatter (routing only)
  - High voltage power supply
  - Fuser safety circuit

Overcurrent/overvoltage

There are two overvoltage devices in this printer:

- Fuse F101 provides overcurrent protection for the fusing system circuitry. Checking or replacing the fuse requires the removal of the ECU. Fuse F102 provides overcurrent protection to the printer DC power supply circuitry.
- In addition, the +24 Vdc and +3.3 Vdc power circuitry contains an overcurrent protection circuit that automatically shuts off the output voltage when an overcurrent condition occurs as a result of a short or an abnormal voltage on the load side.

High-voltage power distribution

The high-voltage power supply applies an overlap of DC and AC voltage to the primary charging roller and the developing roller. This circuit also applies a positive or negative DC voltage to the transfer roller according to the instructions from the engine control unit.

This circuit also controls the image density by changing the primary AC voltage and the developing AC bias according to the print density setting.

High voltage is disabled when the printer door is open.

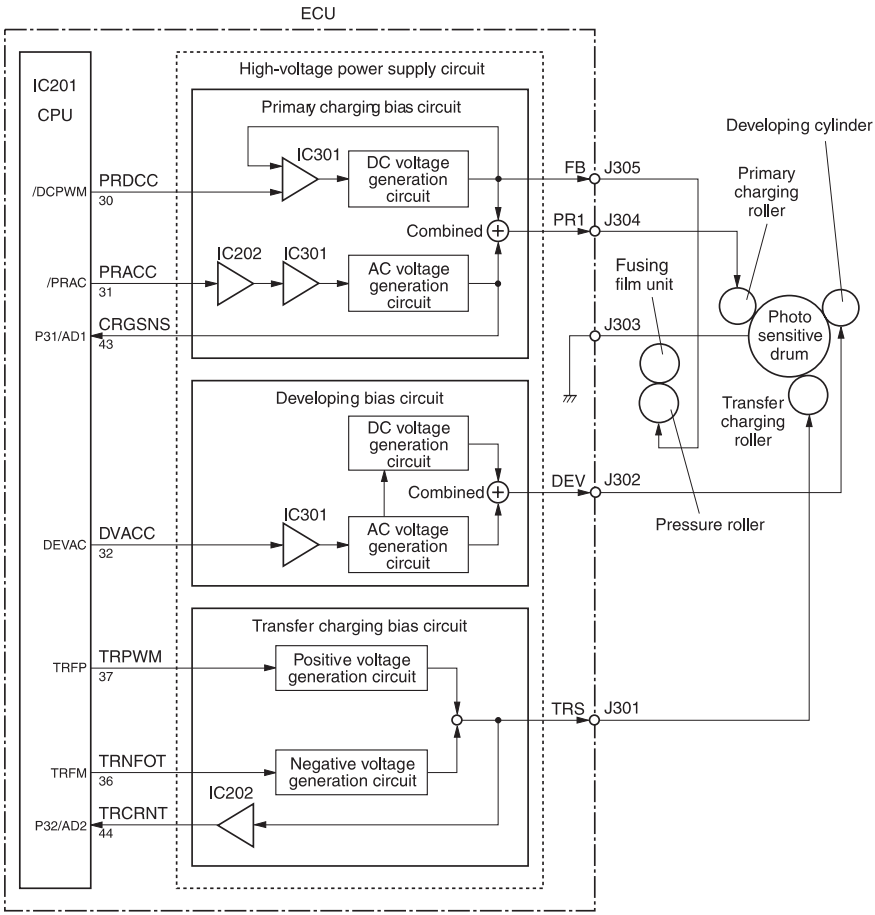

Figure 15. **High-voltage power supply circuit**

Image formation system

Laser printing requires the interaction of several different technologies including electronics, optics, and electrophotographics to provide a printed page. Each process functions independently and must be coordinated with the other printer processes. Image formation consists of seven processes:

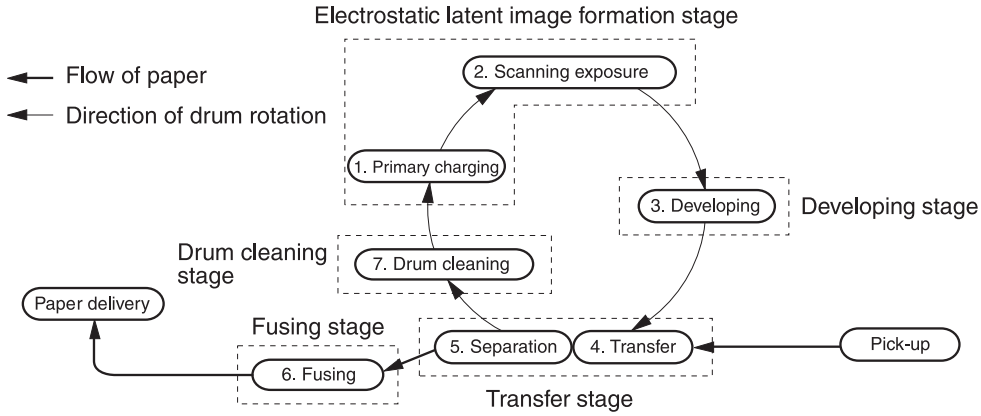

Figure 16. **Image formation block diagram**

Print cartridge

As the focal point of the image formation system, the print cartridge houses the cleaning, conditioning, and developing stages of the process. The print cartridge contains the photosensitive drum, primary charging roller, developing station, toner cavity, and cleaning station. By including these components (which wear, degrade, or are consumed) in the replaceable print cartridge, the need for many service calls is eliminated. The special photosensitive properties of the drum form an image on the drum surface and then transfer the image to media.

CAUTION The print cartridge does not include a light-blocking shutter. Do not expose the drum to light, which can permanently damage the drum. Protect the print cartridge whenever removing it from the printer.

Breakdown of the seven image formation processes

1 **Conditioning stage (primary charging)—**This process applies a uniform negative charge to the surface of the drum with the primary charging roller, which is located in the print cartridge. The primary charging roller is coated with conductive rubber. An AC bias is applied to the roller to erase any residual charges from any previous image. In addition, the primary charging roller applies a negative DC bias to create a uniform negative potential on the drum surface. The print density setting modifies the DC voltage.

2 **Writing stage (scanning exposure)—**During this process, a modulated laser diode projects the beam onto a rotating scanning mirror. As the mirror rotates, the beam reflects off the mirror, first through a set of focusing lenses, then off a mirror, and finally through a slot in the top of the print cartridge, and onto the photosensitive drum. The beam sweeps the drum from left to right, discharging the negative potential wherever the beam strikes the surface. This creates a latent electrostatic image, which later is developed into a visible image.

   Because the beam sweeps the entire length of the drum while the drum rotates, the entire surface area of the drum can be covered. At the end of each sweep, the beam strikes the beam detect lens, generating the beam detect signal (BD signal). The BD signal is sent to the ECU where it is converted to an electrical signal used to synchronize the output of the next scan line of data.

3 **Developing stage—**During this process, the latent electrostatic image is present on the drum. The toner particles obtain a negative surface charge by rubbing against the developing cylinder, which is connected to a negative DC supply. The negatively charged toner is attracted to the discharged (exposed, grounded) areas of the drum, and it is repelled from the negatively charged (unexposed) areas.

4 **Transfer stage—**During this process, the toner image on the drum surface is transferred to the media. The transfer roller applies a positive charge to the back of the media, which attracts the negatively charged toner on the drum surface to the media. After separation, the drum is cleaned and conditioned for the next image.

5 **Separation stage—**During this process, the media separates from the drum. To stabilize the feed system and prevent toner dropouts on the printed image at low temperature and humidity, the static eliminator reduces the charge on the back of the media.

6 **Fusing stage—**During this process, the heat and pressure fuse the toner into the media to produce a permanent image. The media passes between a heated fusing element and a soft pressure roller, which melt the toner and press it into the media.

7 **Drum cleaning stage—**During this process, the cleaning blade is in contact with the surface of the drum at all times. As the drum rotates during printing, it wipes excess toner off the drum and stores it in the waste toner receptacle.

Printer paper-feed system

Step 1 The main input tray and the priority input tray merge into one, main input area. Media placed in any of these areas enables the paper detection sensor (PS931), which informs the ECU that media is present. The following steps occur when the printer receives a print job:

Step 2 The ECU enables the laser/scanner assembly and the motor. Paper motion begins when the ECU energizes the solenoid (SL001).

Step 3 The paper pickup roller rotates once. The paper lift plate pushes the media against the pickup roller.

Step 4 The pickup roller grabs the top sheet and advances it to the feed assembly drive rollers. To ensure that only one sheet is fed, a main separation pad and two subpads hold the remainder of the stack in place.

Step 5 The feed assembly drive rollers advance the media to the paper top sensor (PS911). This sensor informs the ECU of the exact location of the leading edge of media, so that the image being written on the photosensitive drum can be precisely positioned on the page.

Step 6 The feed assembly drive rollers then advance the media to the transfer area where the toner image on the photosensitive drum is transferred to media.

Step 7 After the image is transferred, the media enters the fuser assembly where heat from the fuser and pressure from the pressure roller permanently bond the toner image to media. The paper delivery sensor (PS921) determines that media has successfully moved out of the fusing area.

Step 8 The fuser assembly exit rollers deliver media to either the paper output bin or the straight-through output path, depending upon the position of the straight-through output path door.

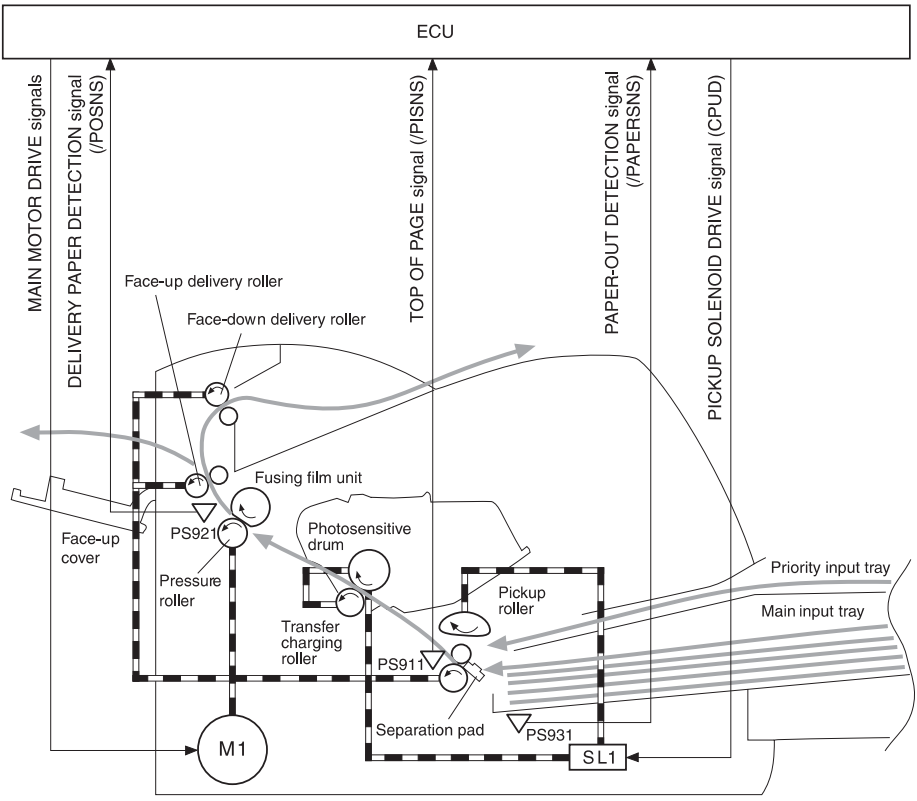

Figure 17. **Printer path**

Jam detection

The paper detection sensor (PS931) detects the presence of media in either the priority input tray or the main input tray. The paper top sensor (PS911) and the paper delivery sensor (PS921) detect media moving through the printer. If a jam is detected, the ECU immediately stops the printing process and displays a jam message on the control panel.

A jam can be detected under any of the following conditions:

- **Pickup delay jam—**Media does not reach the paper top sensor (PS911) after the pickup solenoid (SL001) has been turned on twice (the original pickup plus a retry) within 2 seconds.
- **Pickup stationary jam—**The paper top sensor (PS911) does not detect the trailing edge of media within 1 second of detecting the leading edge.
- **Delivery-delay jam—**The paper delivery sensor (PS921) does not detect the leading edge of media within 1.5 seconds after the paper top sensor (PS911) detects the leading edge.
- **Wrapping jam—**The paper delivery sensor (PS921) does not detect the trailing edge of the media within 0.1 second after the paper top sensor (PS911) detects the leading edge, and one second has passed after the paper delivery sensor detected the leading edge.
- **Delivery-stationary jam—**The paper delivery sensor (PS921) does not detect the leading edge of media within 1.6 seconds after the paper top sensor (PS911) detects the trailing edge.
- **Residual paper jam—**The paper top sensor (PS911) or the paper delivery sensor (PS921) detect media in the initial rotation period.
- **Door open jam—**The paper top sensor (PS911) or the paper delivery sensor (PS921) detect media while the print cartridge door is open.

Solenoid, photosensors, and switches

The following figure shows the locations of the solenoid, photosensors, and switches.

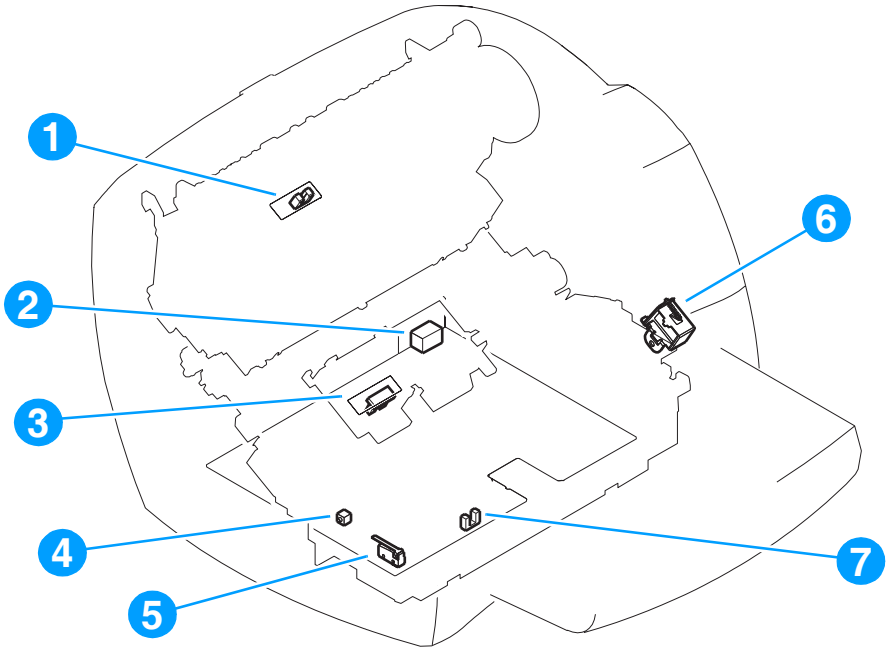

Figure 18. Solenoid, photosensors, and switches

1 Paper delivery sensor (PS921) senses when paper has successfully moved out of the fusing area.

2 Power switch.

3 Paper top sensor (PS911) detects the leading and trailing edges of the paper. It synchronizes the photosenstive drum and the top of the paper.

4 Engine test switch (SW201); see “Engine test” on page 156 for an explanation of the switch.

5 Door-open switch (SW301) detects whether or not the printer door is closed and the print cartridge is present. Printing cannot continue until the printer door is closed and the print cartridge is in its correct position.

6 Solenoid (SL001) enables the pickup roller.

7 Paper detection sensor (PS931) senses when paper is in the main input tray or the priority input tray.

Basic sequence of operation (formatter-to-printer)

The operation sequence of the printer is controlled by the microprocessor (CPU) on the ECU. The following events take place during normal printer operation:

Table 12. Basic sequence of operation

Period	Purpose	Remarks
WAIT After the printer is turned on until the end of the initial rotation of the main motor.	To clear the drum surface of electric potential and to clean the transfer charging roller.	Detects whether or not the cartridge is installed.
STBY (Standby) From the end of the WAIT period or the LSTR period until the pickup command is input from the formatter. Or, from the end of the LSTR period until the printer is turned off.	To keep the printer ready to print.	
INTR (Initial Rotation Period) After the pickup command has been input from the formatter until the media reaches the pickup solenoid.	To stabilize the photosensitive drum sensitivity in preparation for printing. Also to clean the transfer charging roller.	
PRINT (Print) From the end of the initial rotation until the primary voltage goes OFF.	To form images on the photosensitive drum based on the VIDEO signals (/VDO, VDO) input from the formatter and to transfer the toner image onto the media.	
LSTR (Last Rotation Period) After the primary voltage goes OFF until the main motor stops rotating.	To deliver the last page. Also to clean the transfer charging roller.	When the pickup command is input from the formatter, the printer enters the INTR period immediately after the end of the LSTR period.

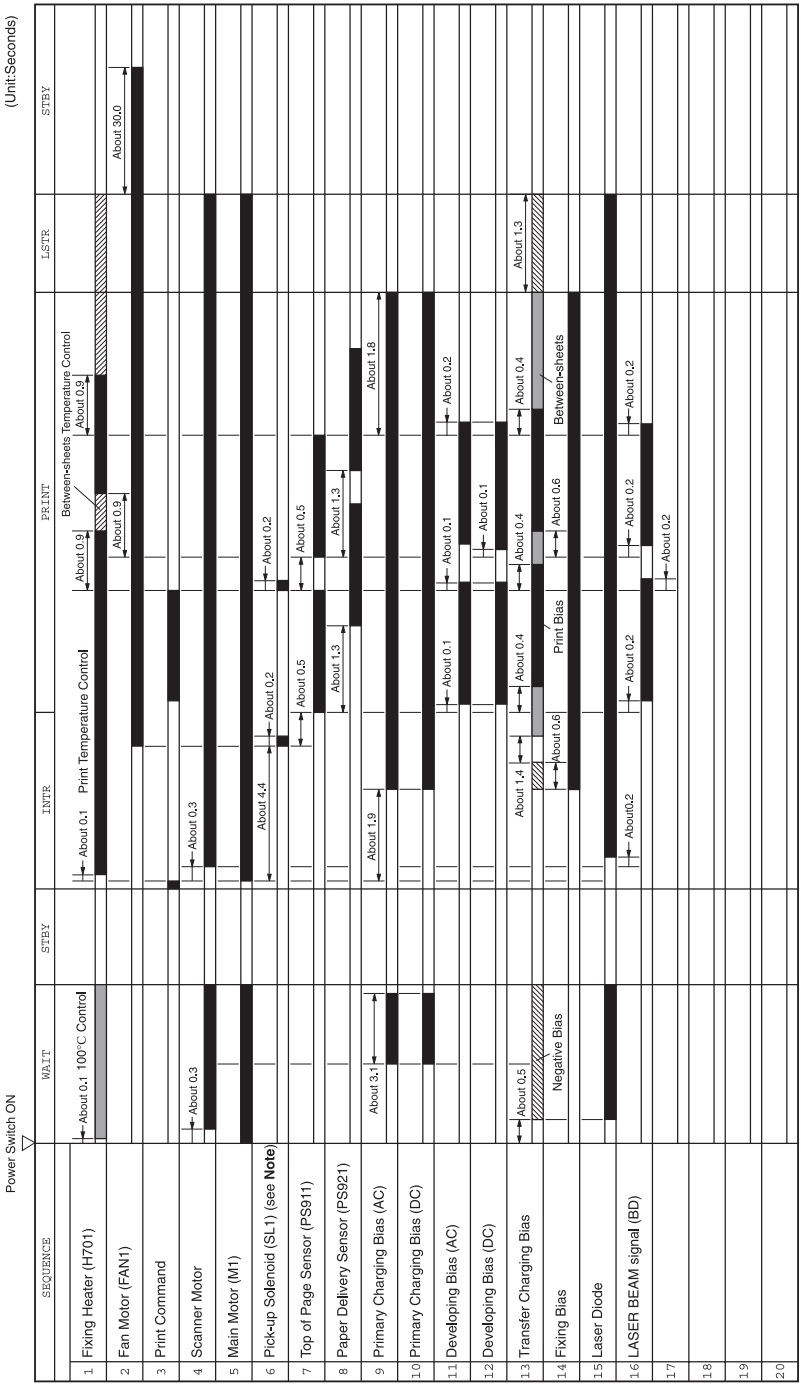

Figure 19. General timing diagram

5 Removal and replacement

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Removal and replacement strategy

This chapter documents the removal and replacement of field replaceable units (FRUs) only.

Replacement is generally the reverse of removal. Occasionally, notes are included to provide directions for difficult or critical replacement procedures.

WARNING! Unplug the power cord from the power outlet before attempting to service the printer. If this warning is not followed, severe injury can result. Certain functional checks during troubleshooting must be performed with power supplied to the printer. However, the power supply should be disconnected during removal.

Never operate or service the printer with the protective cover removed from the laser/scanner assembly. The reflected beam, although invisible, can damage your eyes.

The sheet metal edges of the printer can be sharp. Use caution when working on the printer.

CAUTION Some printer parts are electrostatic discharge (ESD) sensitive. Always perform service work at an ESD-protected workstation.

To install a self-tapping screw, first turn it counterclockwise to align it with the existing thread pattern, then carefully turn it clockwise to tighten. Do not overtighten. If a self-tapping screw-hole becomes stripped, repair the screw-hole or replace the affected assembly.

Always remove the print cartridge before removing or replacing parts. See “Print cartridge” on page 76.

Required tools

- #2 Phillips-head screwdriver with magnetic tip
- Small flatblade screwdriver
- Needle nose pliers
- ESD mat
- Penlight

CAUTION A PoziDriv screwdriver will damage screw heads on the printer. Use a #2 Phillips-head screwdriver.

Before performing service

- Remove all media from the printer.
- Unplug the power cable.
- Place the printer on an ESD mat.
- Remove the main input tray.
- Remove the print cartridge (see below).

Print cartridge

Note You will feel resistance when you open the print cartridge door.

1. Open the print cartridge door, which lifts the print cartridge toward you.
2. Remove the print cartridge.

CAUTION To prevent damage, do not expose the print cartridge to light. Cover it with a piece of paper.

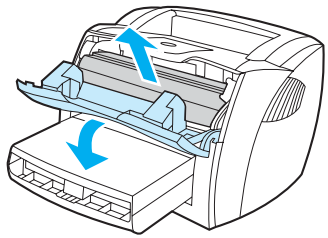
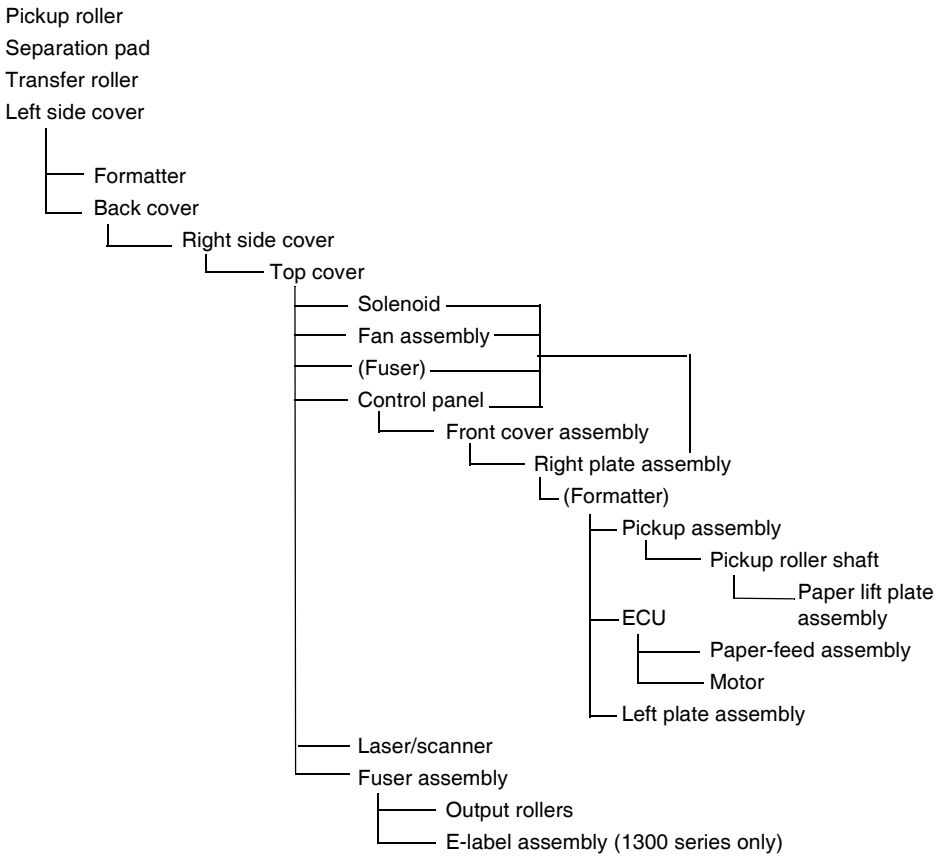


Figure 20. Removing the print cartridge

Parts removal order

Use the following diagram to determine which parts must be removed before removing other parts:



Note

The fuser and the formatter are listed twice.

The fuser must be removed to gain access to the right plate assembly. To remove the fuser only, remove the left side, back, right side, and top covers.

The formatter must be removed to gain access to the pickup assembly, the ECU, and the left plate assembly. To remove the formatter only, remove the left side cover.

Differences between the printers

The HP LaserJet 1150 and the HP LaserJet 1300 series printers share most components in common. However the HP LaserJet 1300 series has some components that the HP LaserJet 1150 does not have. Most of these components accommodate the optional paper feeder. Other differences are that the print cartridge for the HP LaserJet 1150 does not have e-label capability, so the printer has no e-label reader assembly, and the HP LaserJet 1150 does not require an ESD shield over the formatter.

The printers also look slightly different at the left rear corner, where the connections for the USB and parallel cables are located. The HP LaserJet 1300 series has an LIO connectivity slot where the HP LaserJet 1150 has a parallel connection. This difference does not affect disassembly.

Locating the printer differences

Except where noted, the photographs in this manual are of the HP LaserJet 1300 series printer. Figure 21, Figure 22, and Figure 23 indicate components that the HP LaserJet 1300 series has but the HP LaserJet 1150 does not. These components are listed below. The numbers in the list refer to the numbered callouts in the figures.

1 Media transfer guide

2 Connection block and cable guide for the optional paper feeder

3 ESD shield (over the formatter)

4 Link arm for the e-label assembly

5 Gear for driving the optional paper feeder

Note The photo in Figure 21 shows most of the covers removed.

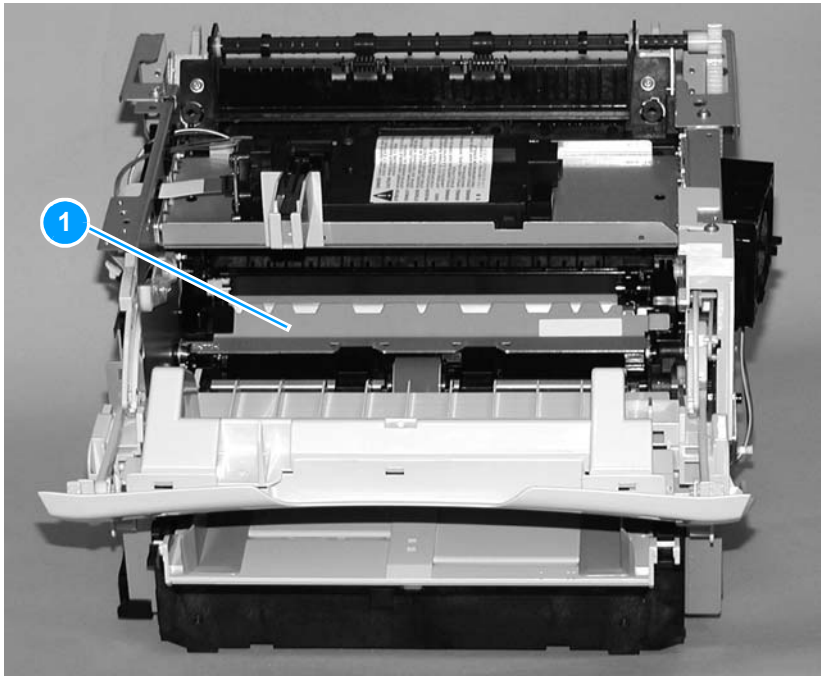


Figure 21. **Printer differences (front)**

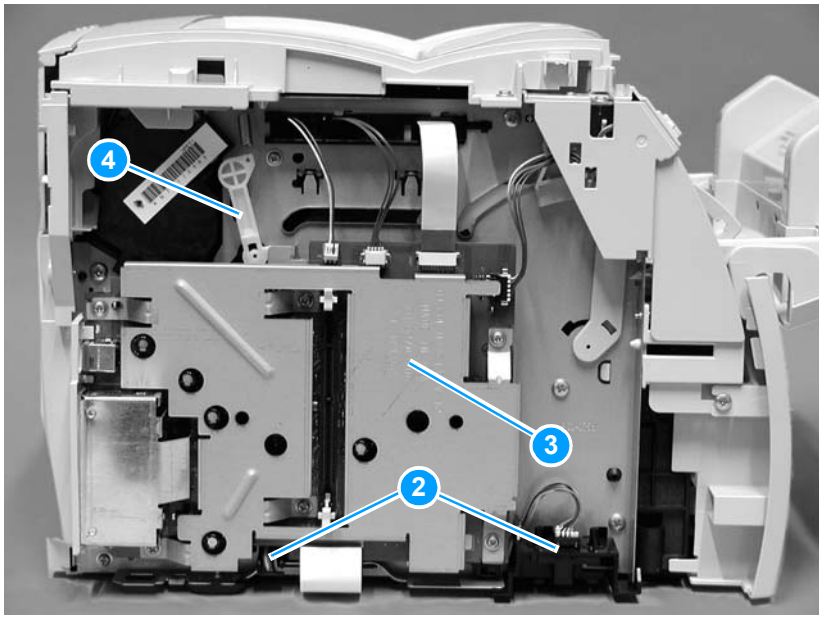


Figure 22. **Printer differences (left side)**

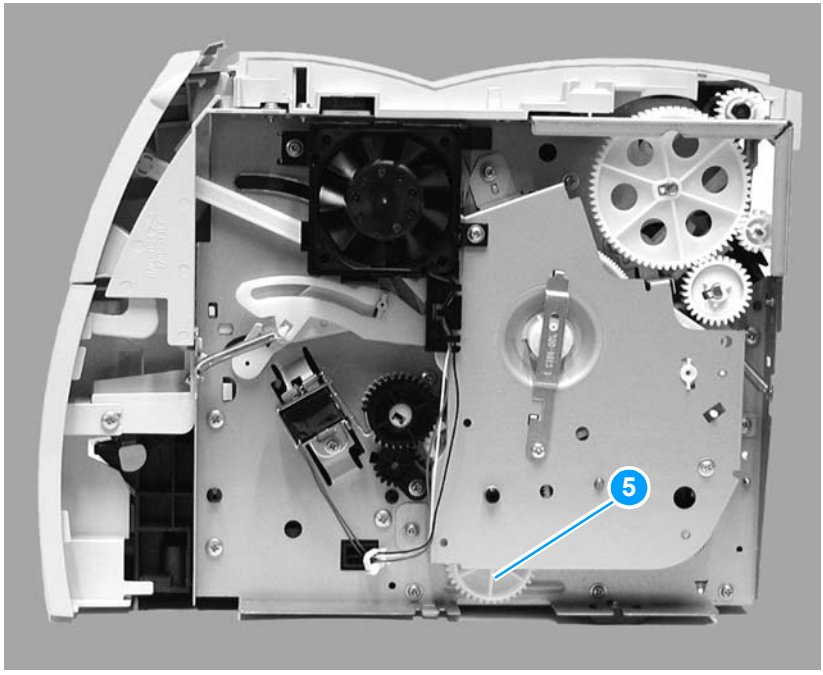


Figure 23. **Printer differences (right side)**

Left side cover

1 Pull out on the notch (callout 1) on the back of the cover.

2 Rotate the cover away from the printer.

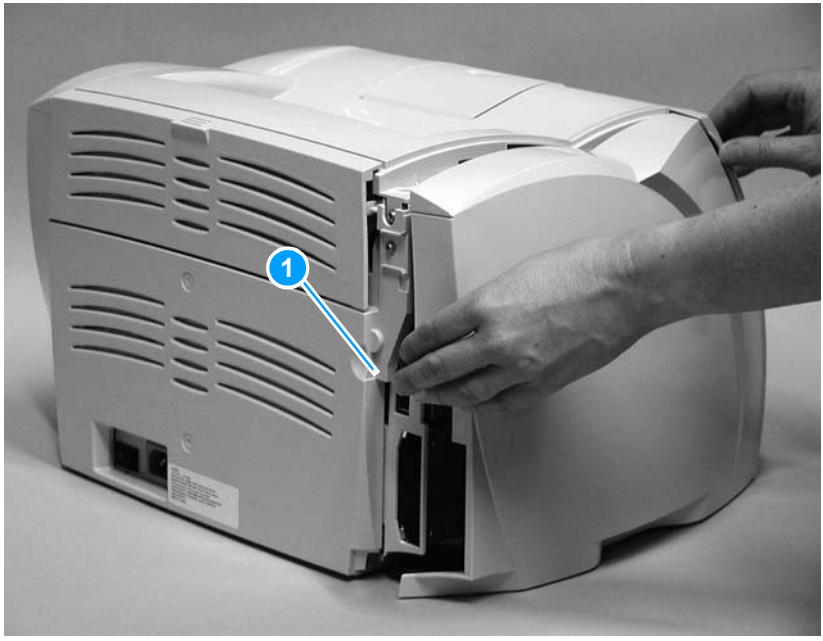


Figure 24. **Removing the left side cover**

Back cover

1 Remove the left side cover (see “Left side cover” on page 81).

2 Open the straight-through output door.

3 Remove two screws (callout 1) from the back of the printer.

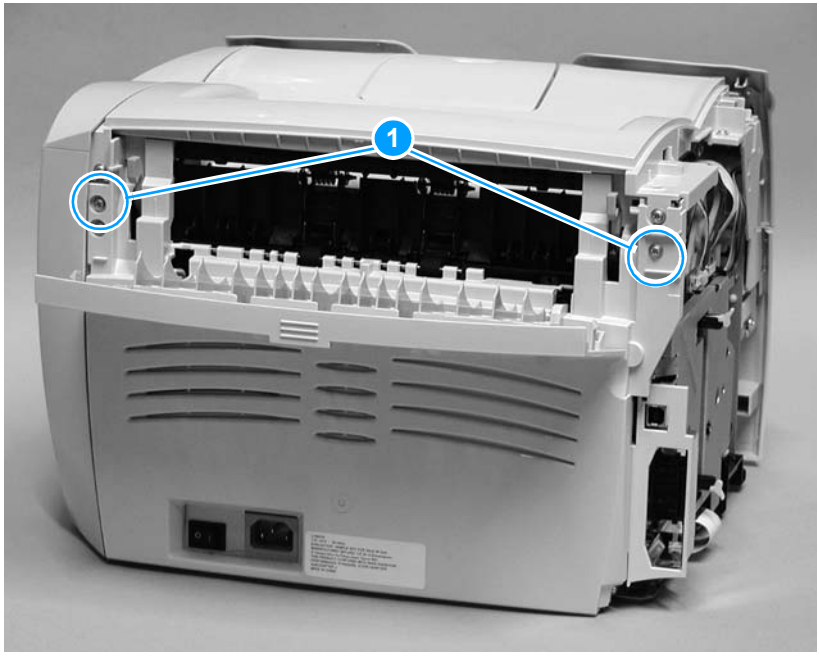


Figure 25. **Removing the back cover (1 of 2)**

4 Press down and hold the two release levers (callout 2) and pull the cover off of the printer.

Note The back cover has two tabs (not shown), one on each side of the printer. Releasing the levers in step 4 releases these two tabs.

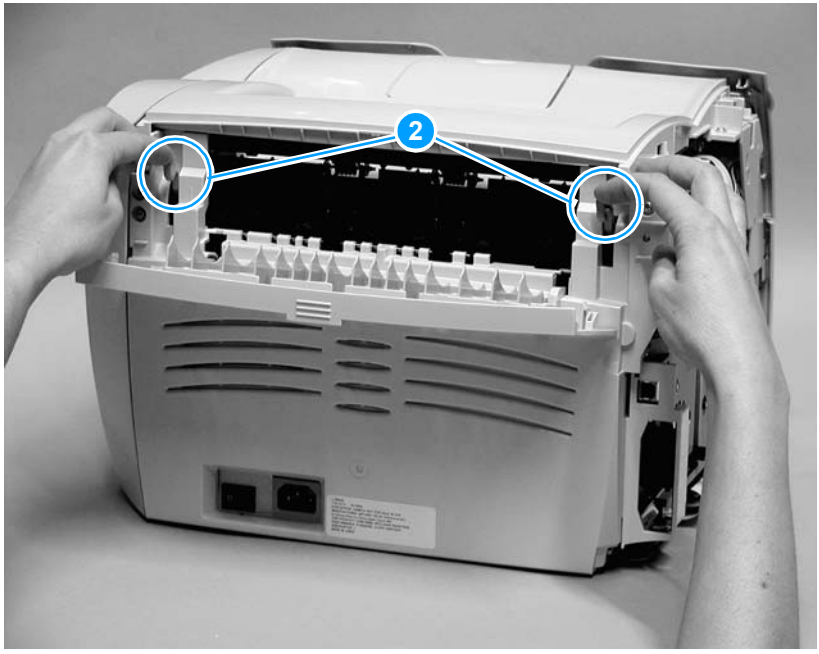


Figure 26. **Removing the back cover (2 of 2)**

Right side cover

1 Open the print cartridge door.

2 Remove the back cover (see “Back cover” on page 82).

3 Remove one screw (callout 1) on the back of the printer.

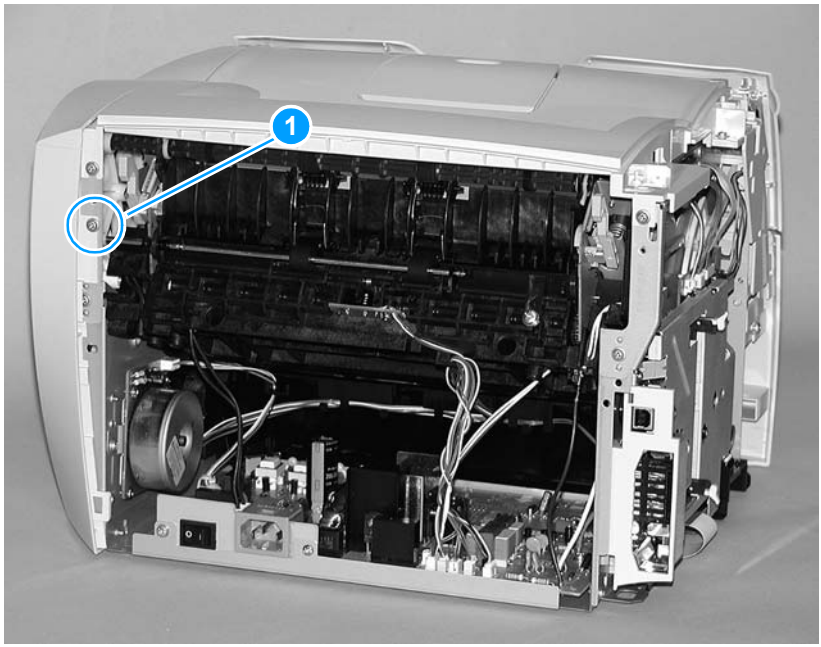


Figure 27. **Removing the right side cover (1 of 3)**

4 Lift the right side of the printer and release the tab (callout 2) on the bottom of the cover.

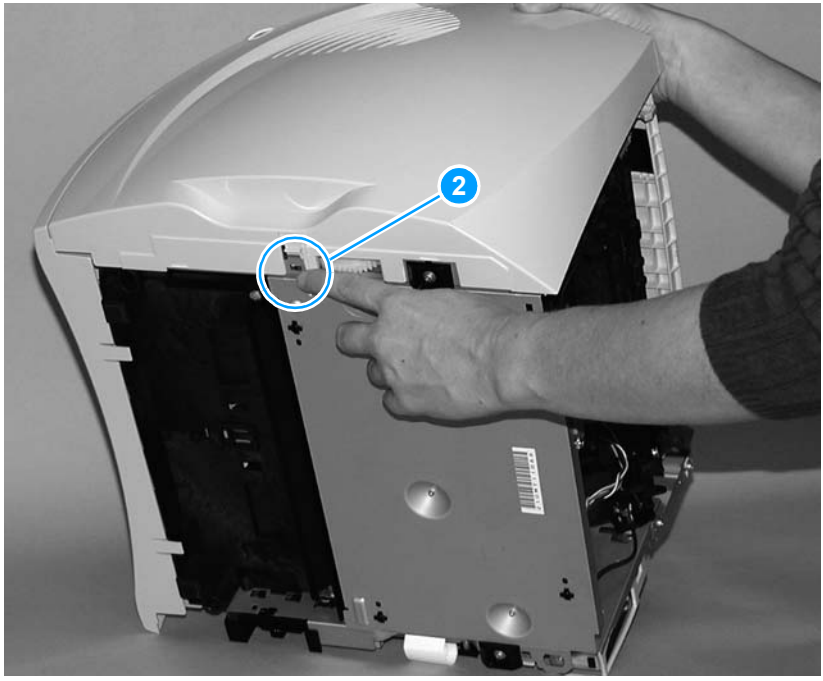


Figure 28. **Removing the right side cover (2 of 3)**

5 While continuing to press the release tab, grasp the top of the cover and rotate it away from the printer.

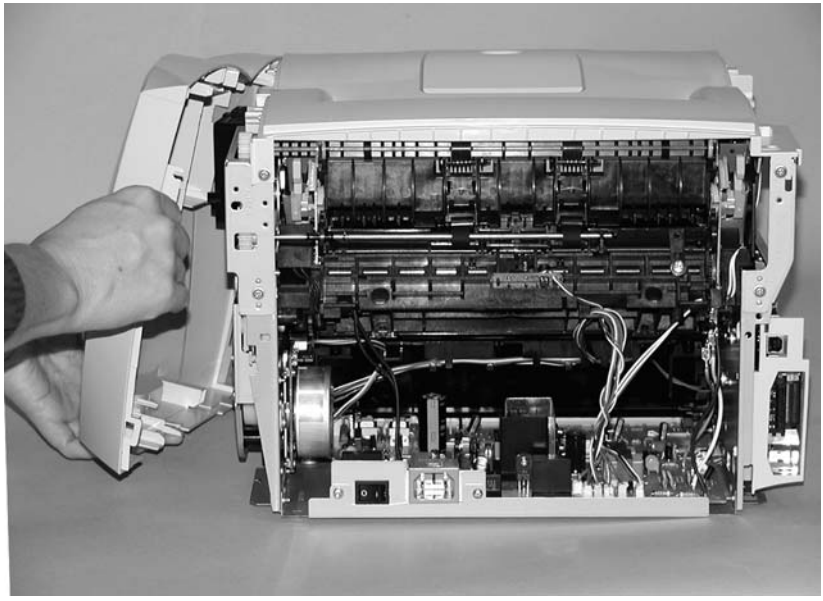


Figure 29. Removing the right side cover (3 of 3)

Top cover

1. Remove the left side cover (see “Left side cover” on page 81).
2. Remove the back cover (see “Back cover” on page 82).
3. Remove the right side cover (see “Right side cover” on page 84).
4. Open the print cartridge door.
5. Loosen two screws (callout 1) on the back of the printer.
6. Remove two screws (callout 2) on the top of the printer.
7. Lift the cover off of the printer.

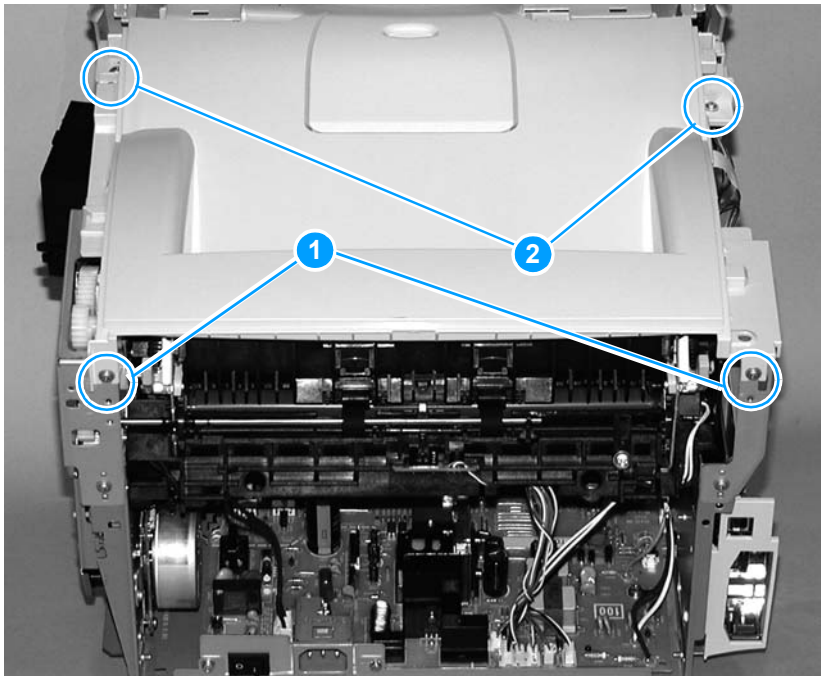


Figure 30. **Removing the top cover**

Control panel assembly

1. Remove the left side cover (see “Left side cover” on page 81).
2. Remove the back cover (see “Back cover” on page 82).
3. Remove the right side cover (see “Right side cover” on page 84).
4. Remove the top cover (see “Top cover” on page 87).
5. Disconnect the control panel cable (callout 1) from the formatter.
6. Remove three screws (callouts 2, 3, and 4) from the top of the control panel assembly.

Note The second screw (callout 3) secures the control panel casing, and the third screw (callout 4) secures the internal bracket. Be sure to hold the assembly together as you remove it.

7. Rotate the control panel assembly toward the front of the printer to release the tab (callout 5).
8. Remove the control panel assembly.

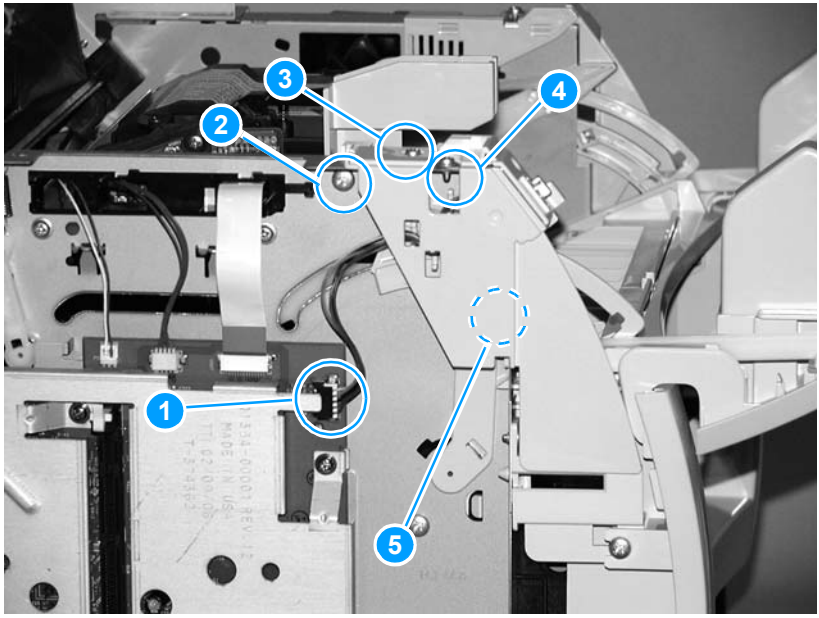


Figure 31. Removing the control panel

Front cover assembly

The front cover assembly is composed of three pieces:

- front cover (the frame that surrounds the main input tray)
- print cartridge door
- front guide assembly (the internal shelf that attaches the front cover and the print cartridge door to the printer)

Front cover

1. Remove the left side cover (see “Left side cover” on page 81).
2. Remove the back cover (see “Back cover” on page 82).
3. Remove the right side cover (see “Right side cover” on page 84).
4. Remove the top cover (see “Top cover” on page 87).
5. Close the print cartridge door.
6. Loosen two screws (one shown, callout 1), one on each side of the cover.

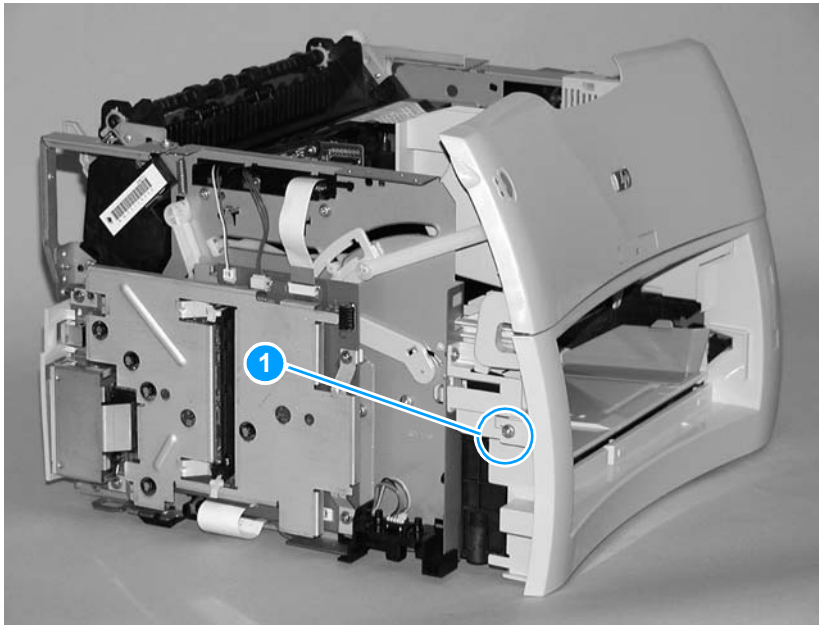


Figure 32. **Removing the front cover (1 of 2)**

7 Pull the top of the front cover away from the printer to release the three tabs (callout 2).

8 Lift the front of the printer to release the tabs on the bottom of the front cover.

9 Remove the front cover.

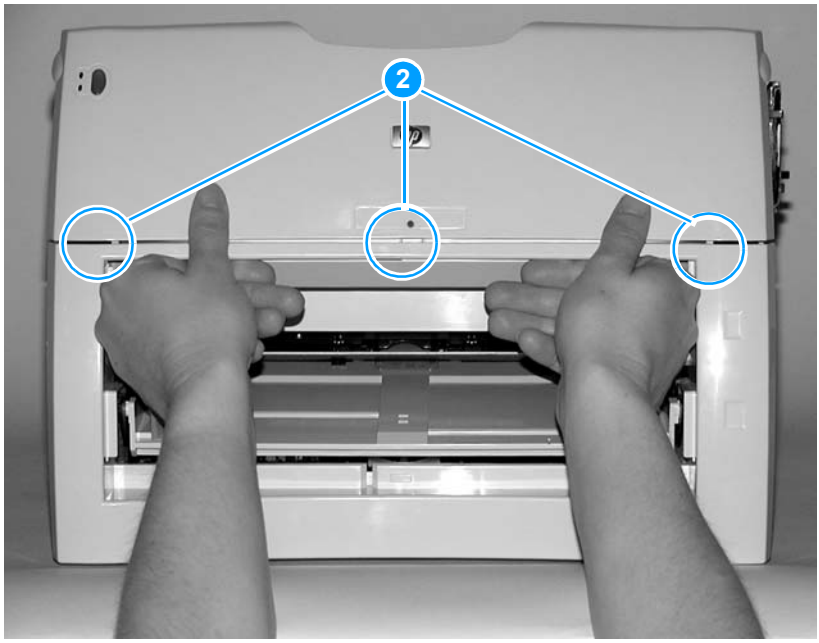


Figure 33. **Removing the front cover (2 of 2)**

Print cartridge door

1. Remove the left side cover (see “Left side cover” on page 81).
2. Remove the back cover (see “Back cover” on page 82).
3. Remove the right side cover (see “Right side cover” on page 84).
4. Remove the top cover (see “Top cover” on page 87).
5. Remove the control panel assembly (see “Control panel assembly” on page 88).
6. Remove the front cover (see “Front cover assembly” on page 89).
7. Open the print cartridge door.
8. At the right side, press the two small tabs (callout 1) on the inside of the connecting link to release it.
9. Repeat on the left side.

Note After the print cartridge door is removed, it is easy to remove the two connecting links.

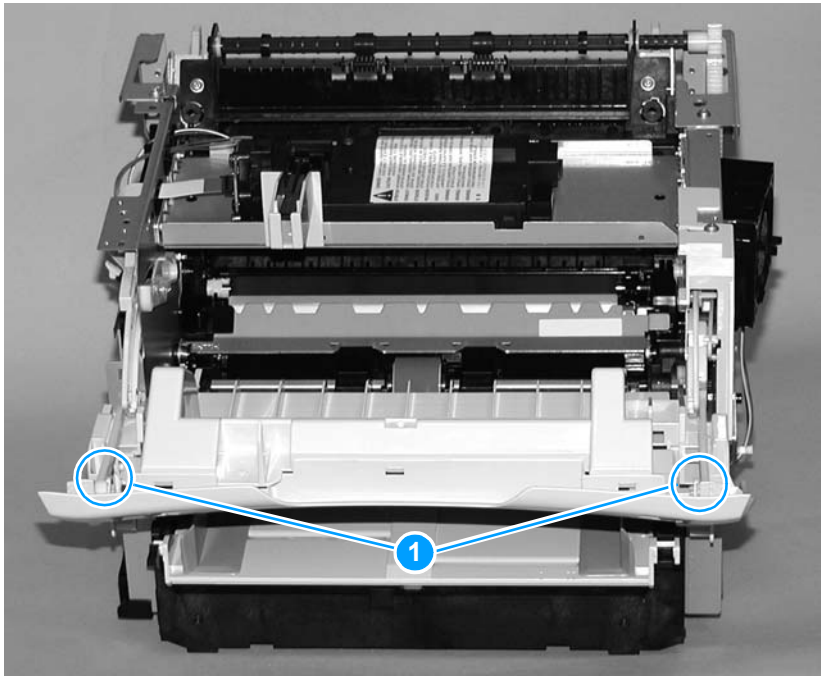


Figure 34. Removing the print cartridge door (1 of 2)

10 Unhook the print cartridge door hinge on the right side, and slide the print cartridge door toward the left to remove it.

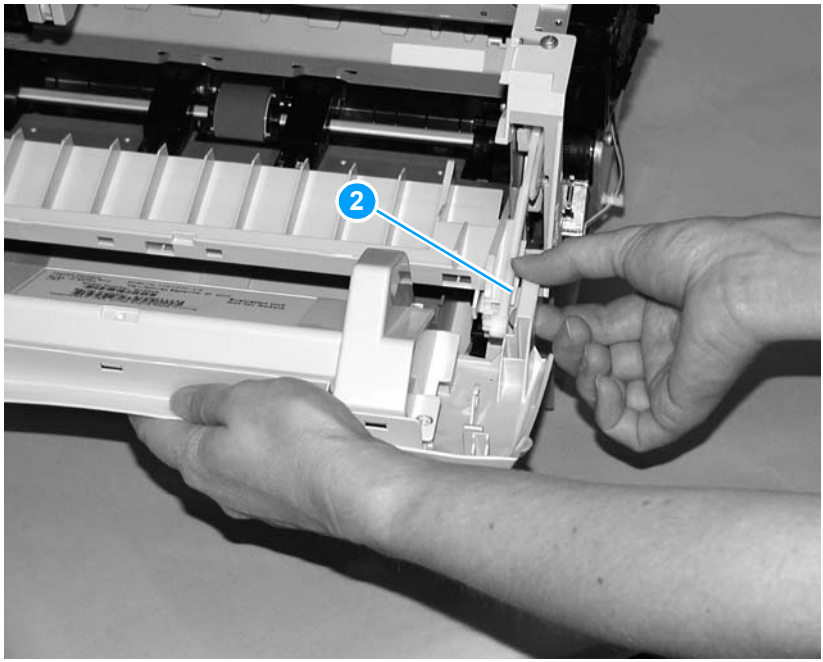


Figure 35. **Removing the print cartridge door (2 of 2)**

To reinstall

Lift the print cartridge door hinge above the stop (callout 2). Otherwise, the print cartridge door will not close.

Front guide assembly

1. Remove the left side cover (see “Left side cover” on page 81).
2. Remove the back cover (see “Back cover” on page 82).
3. Remove the right side cover (see “Right side cover” on page 84).
4. Remove the top cover (see “Top cover” on page 87).
5. Remove the control panel assembly (see “Control panel assembly” on page 88).
6. Remove the front cover (see “Front cover assembly” on page 89).
7. Remove the print cartridge door (see “Print cartridge door” on page 91).
8. From the front of the printer, remove two screws (callout 1).

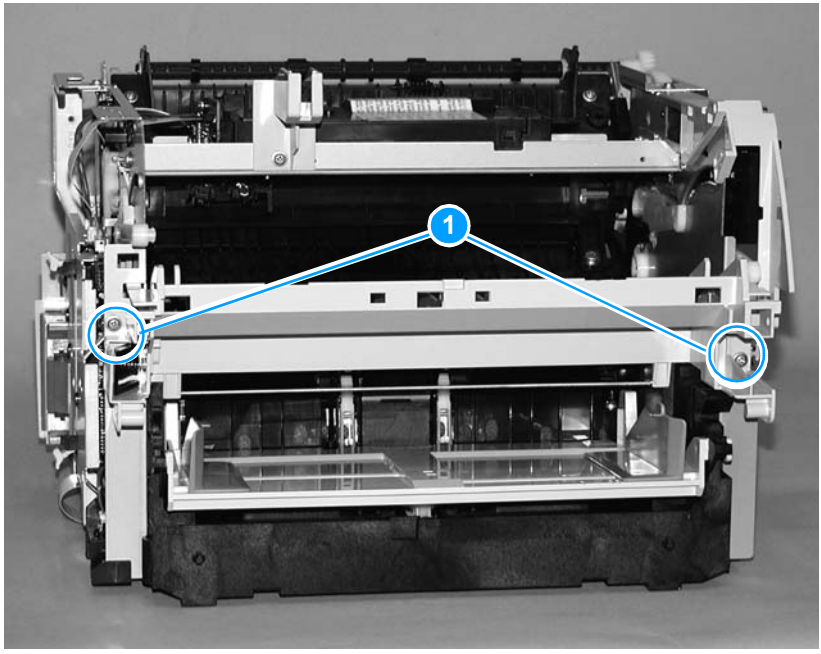


Figure 36. **Removing the front guide assembly (1 of 3)**

9 On the right side, release the lower tab (callout 2) and the upper tab (callout 3).

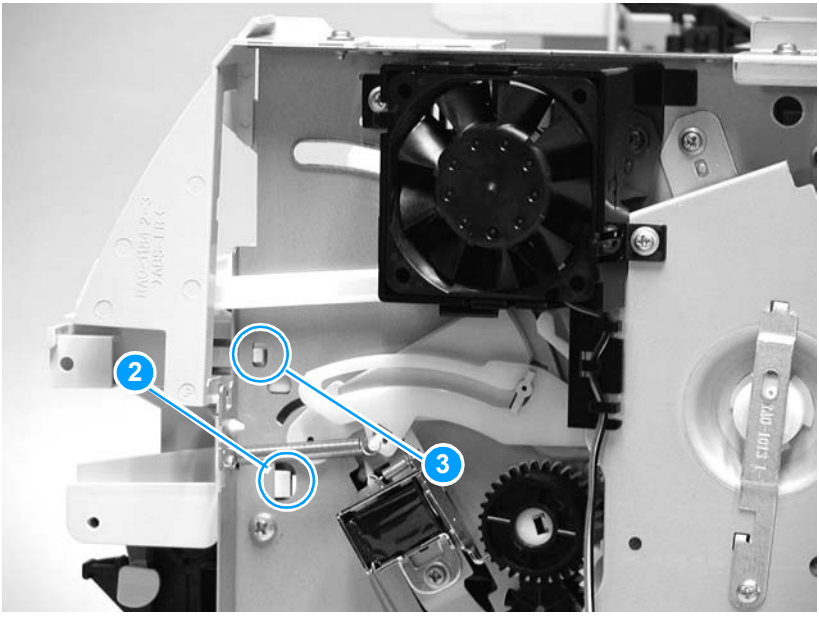


Figure 37. **Removing the front guide assembly (2 of 3)**

10 On the left side, release the upper tab (callout 4) and the lower tab (callout 5).

11 Remove the front guide assembly.

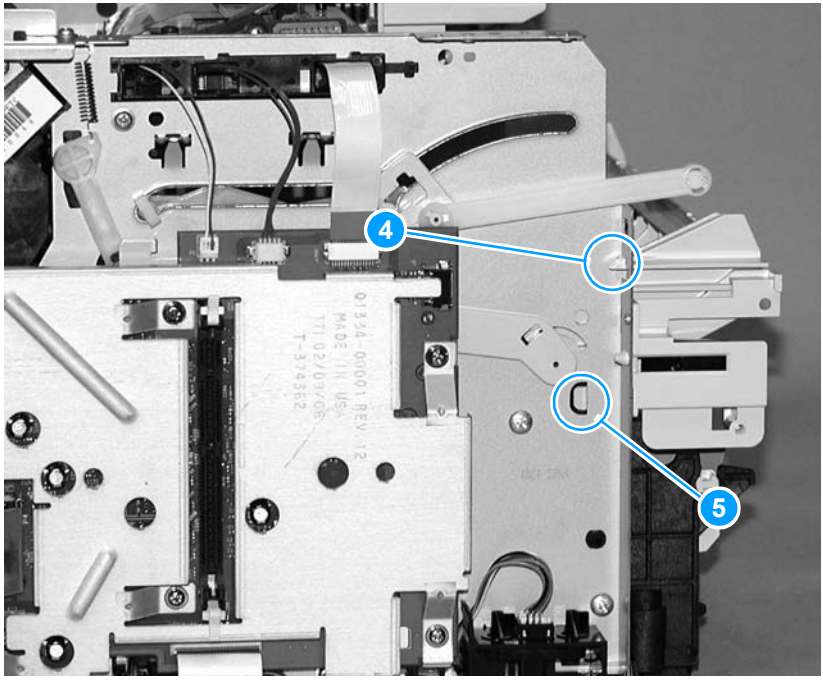


Figure 38. Removing the front guide assembly (3 of 3)

Transfer roller

The transfer roller is extremely difficult to remove. Before proceeding, make sure it is absolutely necessary to remove the roller. For instructions on removing the entire transfer roller assembly, see step 9 of “Paper-feed roller” on page 133.

CAUTION **Do not touch the black sponge portion of the transfer roller.**

1. Open the print cartridge door and remove the print cartridge (see “Print cartridge” on page 76).
2. Use needle nose pliers to gently squeeze the two small tabs on the transfer roller.
3. Lift the transfer roller up, slide it to the right, and lift it out of the printer.

Note Do not misplace the small grounding spring that is underneath the right side of the transfer roller.

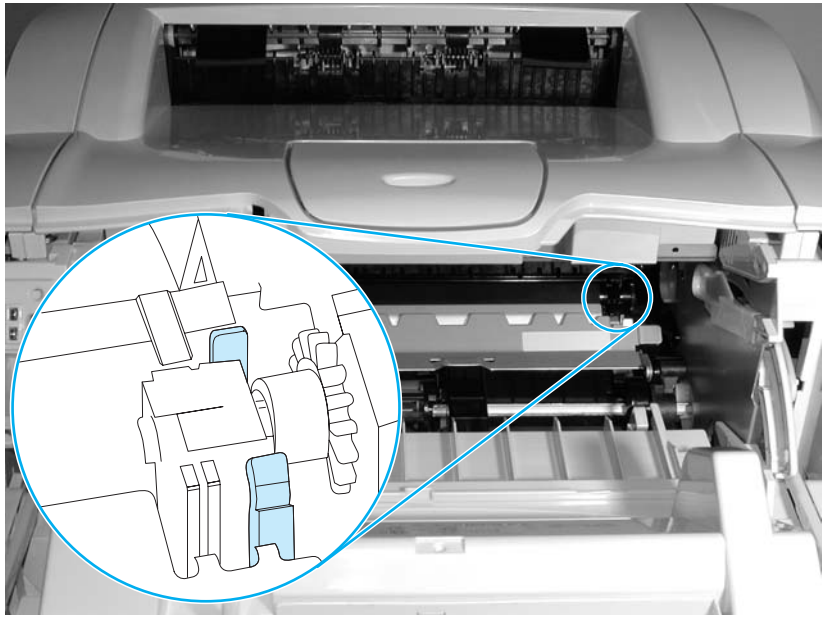


Figure 39. **Removing the transfer roller**

Formatter (hp LaserJet 1300 series)

1 Remove the left side cover (see “Left side cover” on page 81).

2 Disconnect the two flat flexible cables (callout 1) on the formatter.

3 Disconnect the two connectors (callout 2) at the top of the formatter.

4 Disconnect the control panel cable (callout 3).

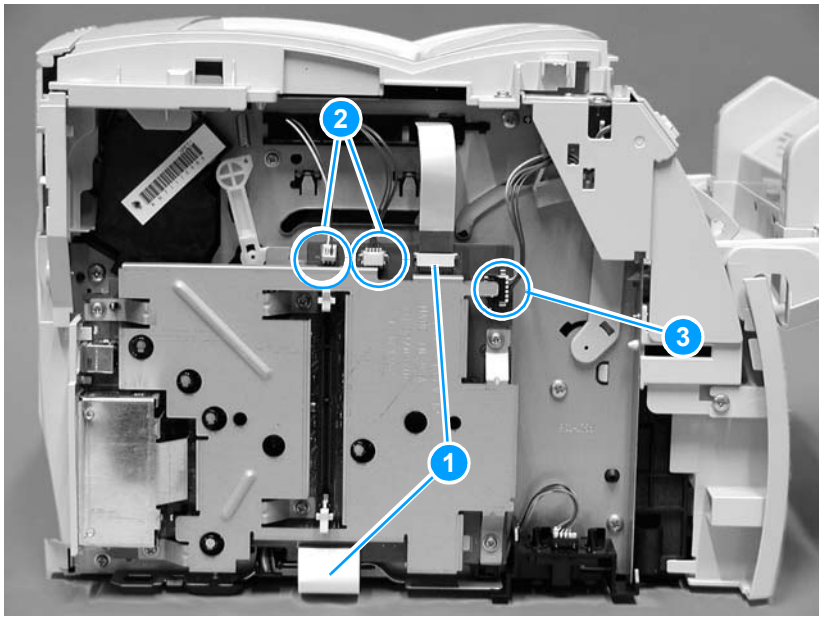


Figure 40. **Removing the HP LaserJet 1300 series formatter (1 of 2)**

5 Remove six screws (callout 4).

6 Rotate the formatter up and off of the hooks on the chassis and remove it from the printer.

7 Disconnect and remove the ESD shield from the formatter.

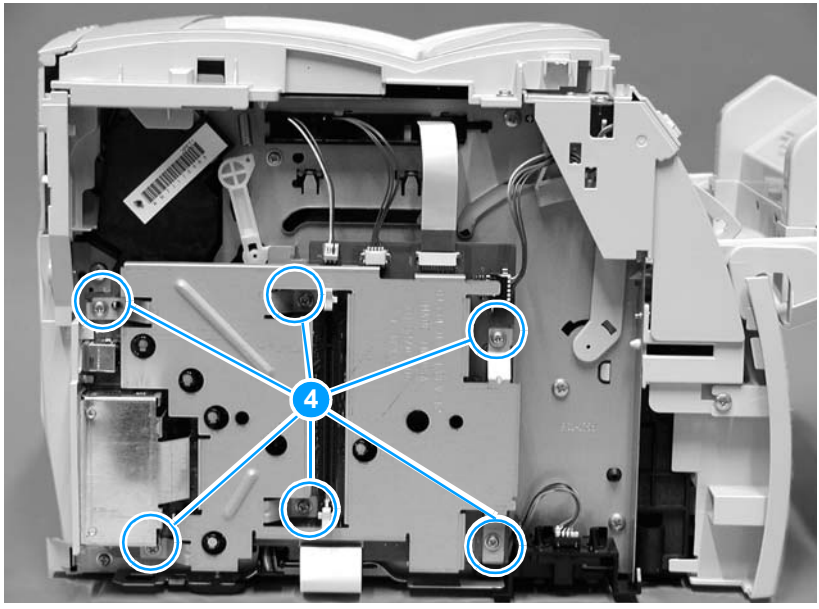


Figure 41. **Removing the HP LaserJet 1300 series formatter (2 of 2)**

Formatter (hp LaserJet 1150 printer)

1 Remove the left side cover (see “Left side cover” on page 81).

2 Disconnect the two flat flexible cables (callout 1) on the formatter.

3 Disconnect the connector (callout 2) at the top of the formatter.

4 Disconnect the control panel cable (callout 3).

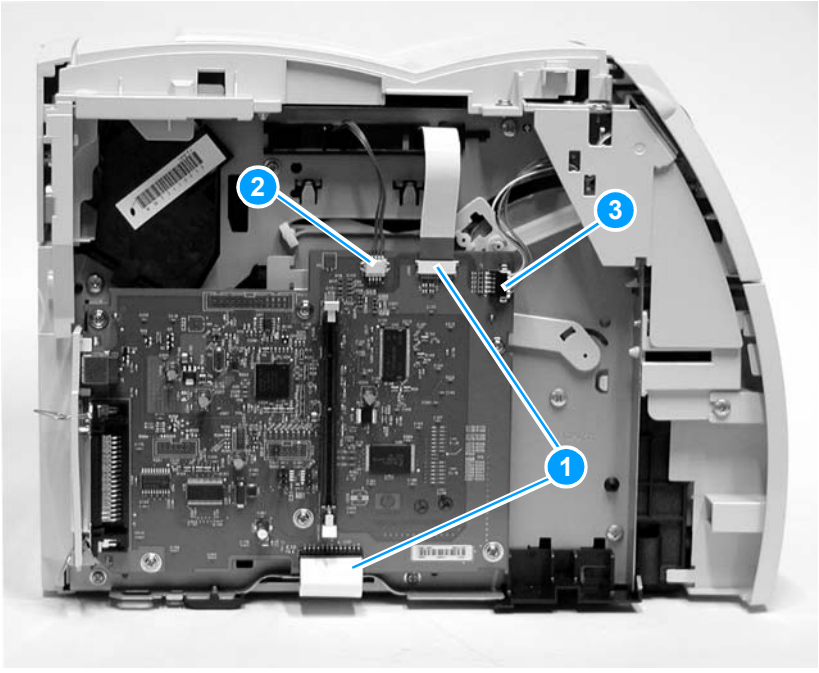


Figure 42. **Removing the HP LaserJet 1150 printer formatter (1 of 2)**

5 Remove the six screws (callout 4).

6 Rotate the formatter up and off the hooks on the chassis and remove it from the printer.

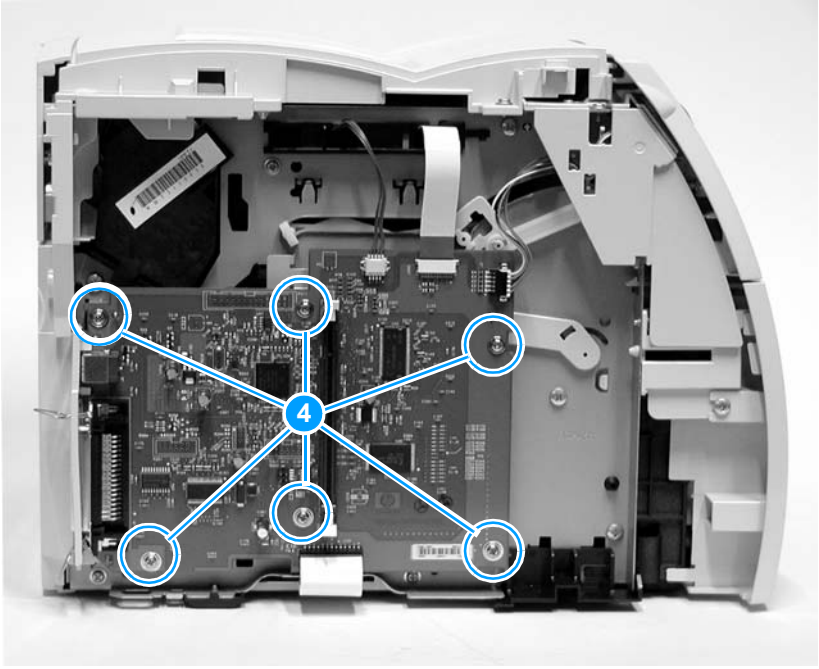


Figure 43. **Removing the HP LaserJet 1150 printer formatter (2 of 2)**

Laser/scanner assembly

WARNING! Never operate or service the printer with the protective cover removed from the laser/scanner assembly. The reflected beam, although invisible, can damage your eyes.

1. Remove the left side cover (see “Left side cover” on page 81).
2. Remove the back cover (see “Back cover” on page 82).
3. Remove the right side cover (see “Right side cover” on page 84).
4. Remove the top cover (see “Top cover” on page 87).
5. Disconnect the flat flexible cable from its socket (callout 1) on the laser/scanner.
6. Disconnect the cable connector (callout 2) from the formatter.

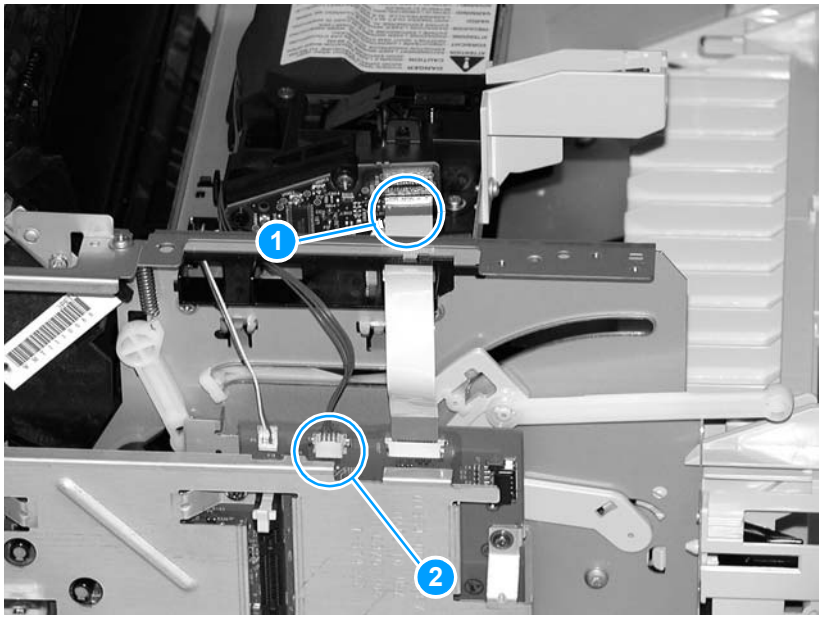


Figure 44. Removing the laser/scanner (1 of 2)

7 Release the two tabs (callout 3), one on each side of the shutter lever, and lift the shutter lever straight up to remove it. Be sure to release both tabs to avoid breaking one of the tabs.

Note Make sure you do not misplace the small spring that is under the shutter lever.

8 Remove four screws (callout 4) and then lift the assembly off of the printer.

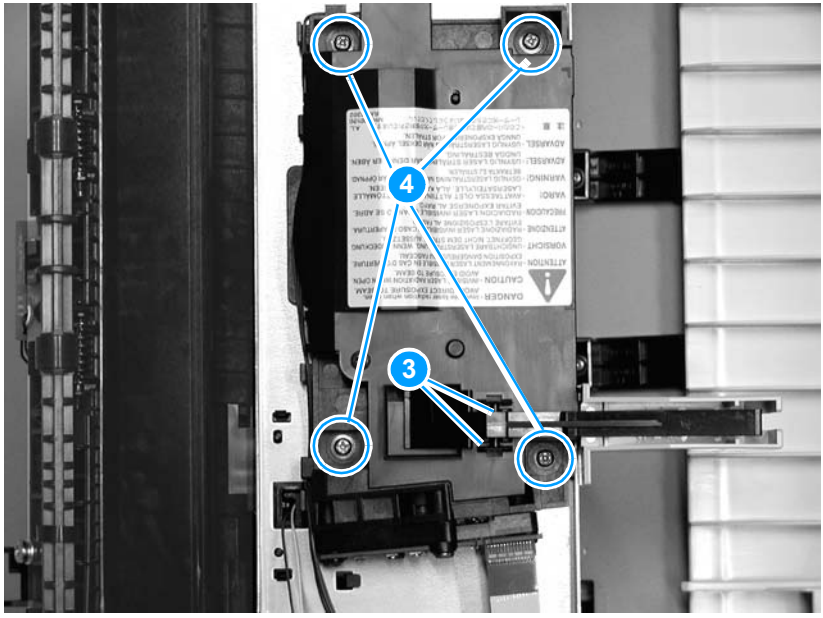


Figure 45. **Removing the laser/scanner (2 of 2)**

To reinstall

Insert the spring into the hole on the laser/scanner before you snap the shutter lever back into place.

Fuser assembly

1 Remove the left side cover (see “Left side cover” on page 81).

2 Remove the back cover (see “Back cover” on page 82).

3 Remove the right side cover (see “Right side cover” on page 84).

4 Remove the top cover (see “Top cover” on page 87).

5 Remove two screws (callout 1) from the right fuser plate.

6 Remove a third screw (callout 2) from behind the large gear on the right fuser plate.

Note

You can access the third screw through the holes in the 69Tgear.

If you need to realign the 69T gear, you must first remove the pressure roller gear. Release the tab (callout 3) and remove the pressure roller gear from the printer.

7 Remove the bracket.

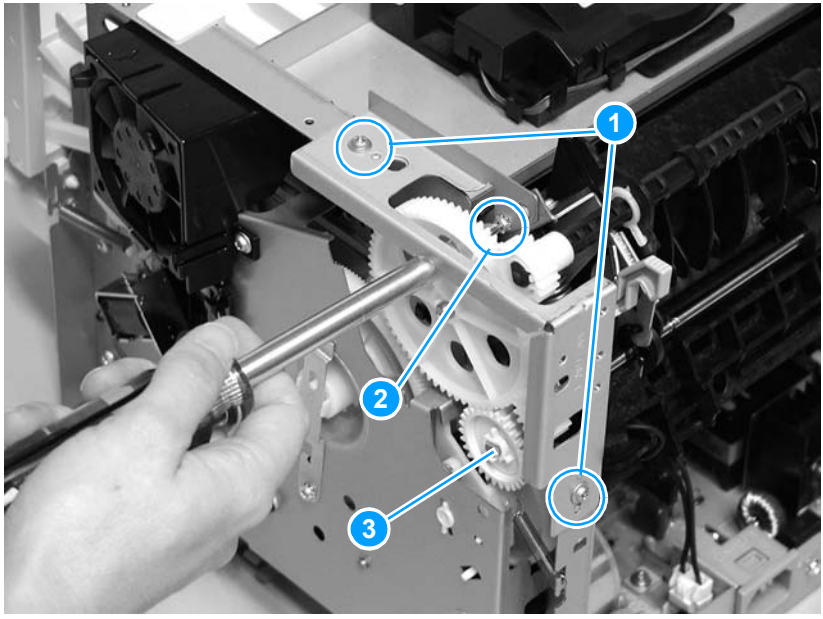


Figure 46. Removing the fuser assembly (1 of 4)

8 Remove three screws (callout 4) from the left fuser plate.

9 Remove the bracket.

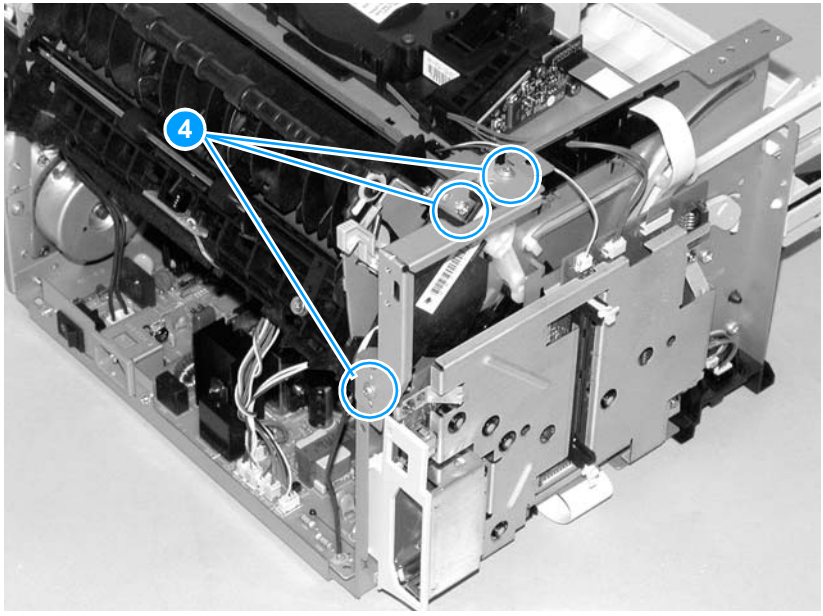


Figure 47. **Removing the fuser assembly (2 of 4)**

10 Remove two screws (callout 5), one from each side of the printer.

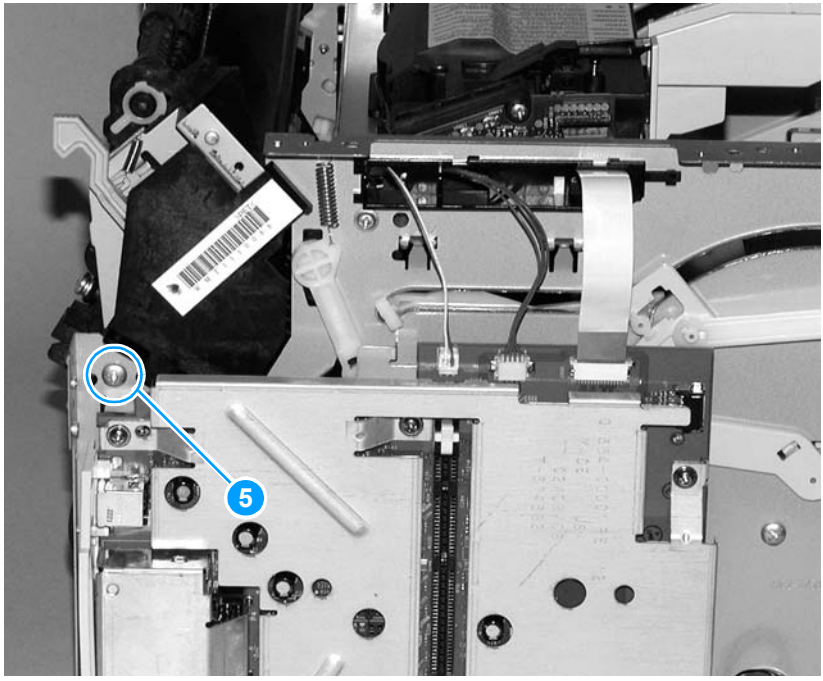


Figure 48. **Removing the fuser assembly (3 of 4)**

11 Unplug the fuser cable connector (callout 6) by pressing and releasing the tab on the back of the connector.

12 Unplug black-and-white fuser cable connector (callout 7) from the ECU and unwind the fuser cable from the other cables.

13 Unplug the spade connector closest to the rear of the printer (callout 8).

14 Remove one screw (callout 9) from the paper delivery sensor, and lift the paper delivery sensor out of the printer.

15 Pull outward on both sides of the printer frame to release the fuser. Lift the fuser assembly gently out of the printer.

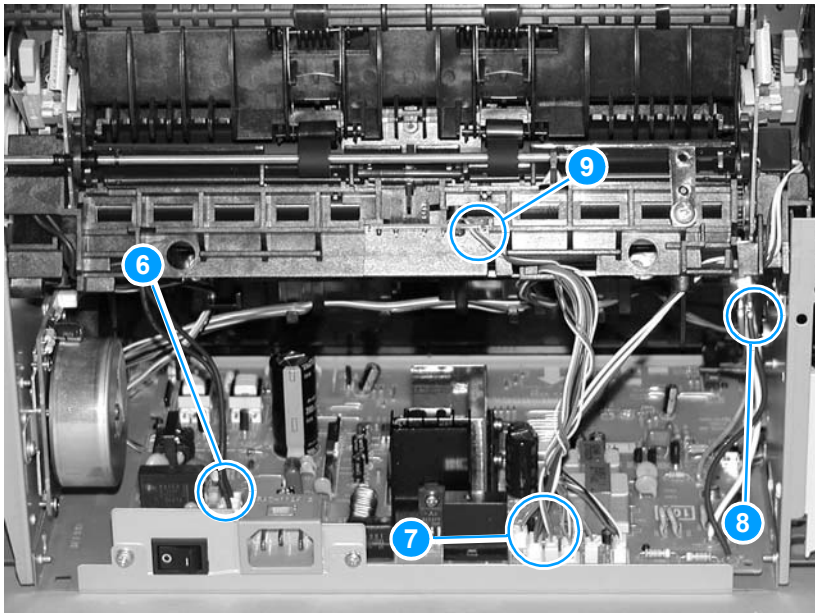


Figure 49. **Removing the fuser assembly (4 of 4)**

To reinstall

Remove the large gear from the end of the fuser assembly, return the fuser assembly to the chassis, and replace the large gear.

Output rollers

Face-down delivery assembly

1 Remove the fuser assembly (see “Fuser assembly” on page 103).

2 Remove two screws (callout 1) and lift the face-down delivery assembly away from the fuser assembly.

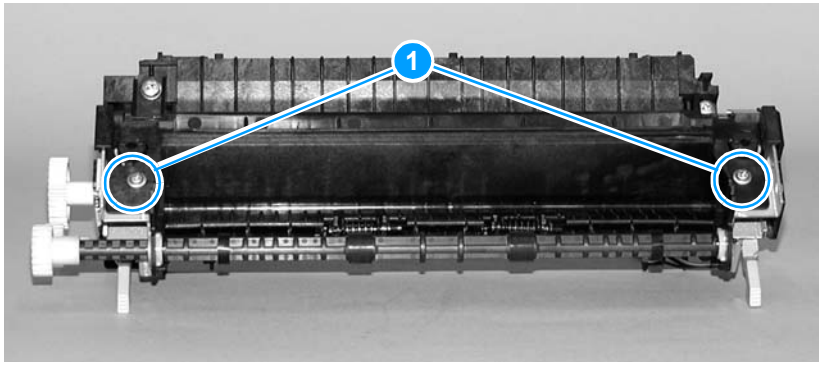


Figure 50. **Removing the output rollers (1 of 2)**

Face-up roller

1. Turn the fuser assembly over.
2. Remove the gear (callout 1) from the face-up roller and release the tab (callout 2) on the face-up roller bushing.
3. Rotate the face-up roller bushing forward until the pin releases.
4. Slide the face-up roller away from the gear side, and lift it out of the fuser assembly.

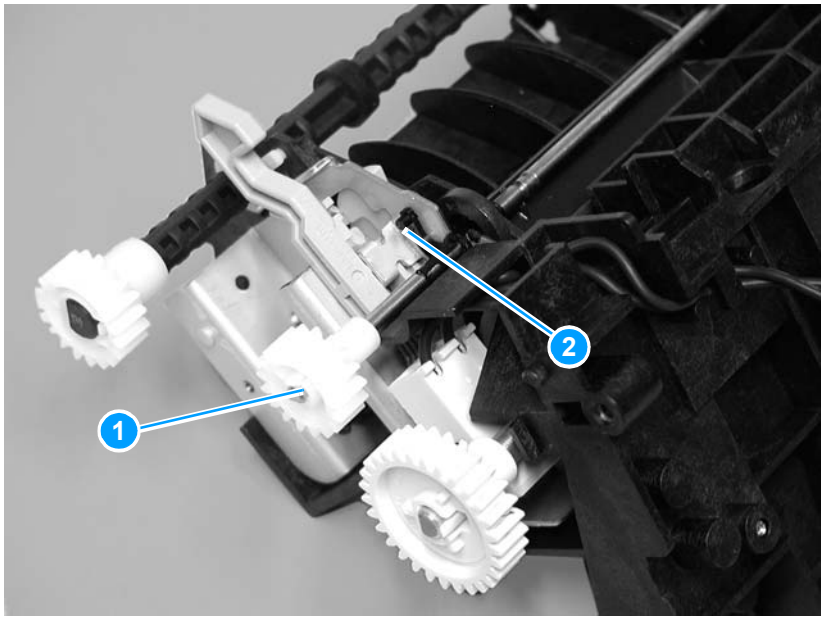


Figure 51. **Removing the output rollers (2 of 2)**

Reinstall note

Flex the face-up roller bushing to pop the pin back into place.

E-label assembly (hp LaserJet 1300 only)

1. Remove the left side cover (see “Left side cover” on page 81).
2. Remove the back cover (see “Back cover” on page 82).
3. Remove the right side cover (see “Right side cover” on page 84).
4. Remove the top cover (see “Top cover” on page 87).
5. Remove the fuser assembly (see “Fuser assembly” on page 103).
6. Open the print cartridge door.
7. Reach under the laser/scanner plate, and grasp the e-label assembly (callout 1), which is attached to the bottom of the laser/scanner plate.
8. Unhook the two tabs (callout 2) to release the e-label assembly.
9. Pull down on the white e-label link arm (callout 3), and unhook the e-label assembly. Remove the e-label assembly.

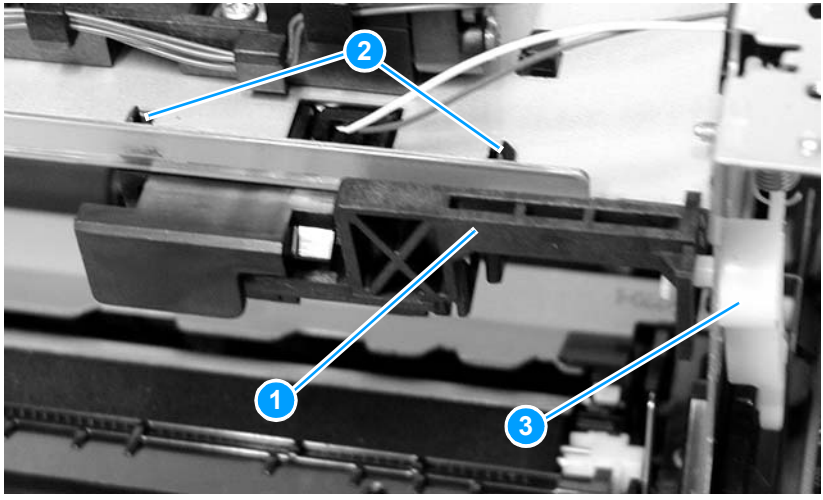


Figure 52. **Removing the e-label assembly**

Motor

1 Remove the left side cover (see “Left side cover” on page 81).

2 Remove the back cover (see “Back cover” on page 82).

3 Remove the right side cover (see “Right side cover” on page 84).

4 Remove the fuser assembly (see “Fuser assembly” on page 103).

5 Remove the ECU pan (see “ECU” on page 127).

6 Disconnect the motor cable connector (callout 1) above the motor.

7 Remove the three screws (callout 2) from the motor and lift the motor out of the printer.

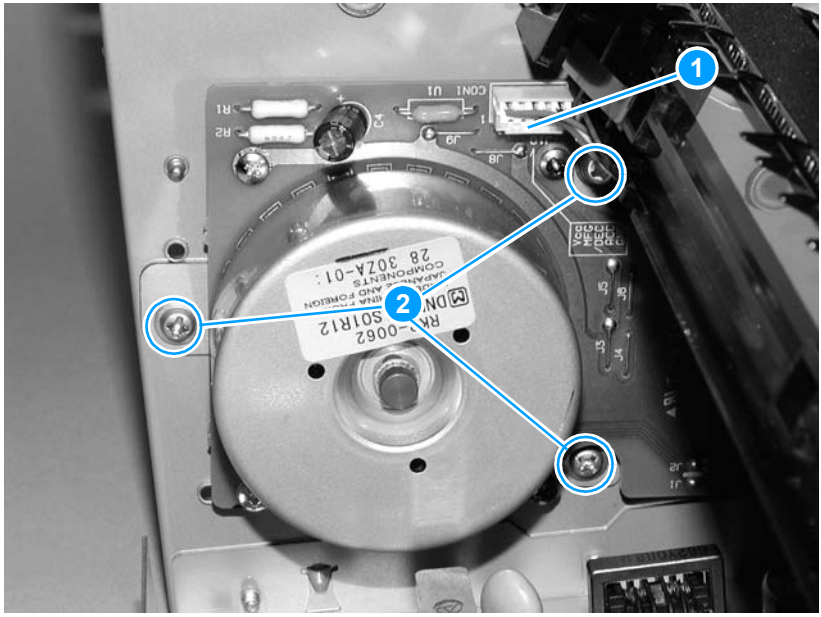


Figure 53. **Removing the motor**

To reinstall

Make sure that the motor is in the correct position. The connector should be above and to the back of the motor.

Solenoid

1. Remove the left side cover (see “Left side cover” on page 81).
2. Remove the back cover (see “Back cover” on page 82).
3. Remove the right side cover (see “Right side cover” on page 84).
4. Unplug six cable connectors (callout 1) from the ECU and separate the solenoid cable from the other five cables.
5. Carefully unwind the solenoid cable from the cable guides (callout 2).

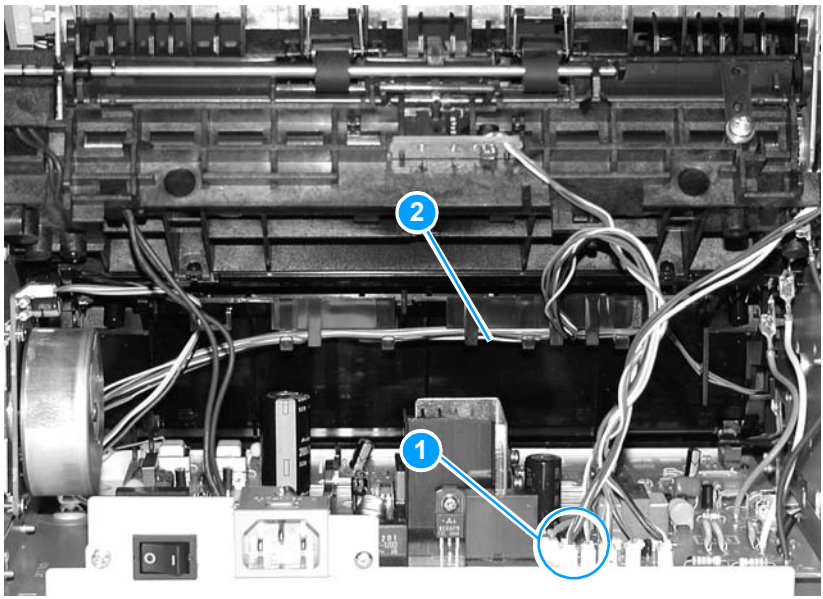


Figure 54. **Removing the solenoid (1 of 2)**

6 Remove the screw (callout 3) on the solenoid.

7 Gently thread the solenoid cable through the hole (callout 4) in the right side plate.

8 Lift the solenoid off of the printer.

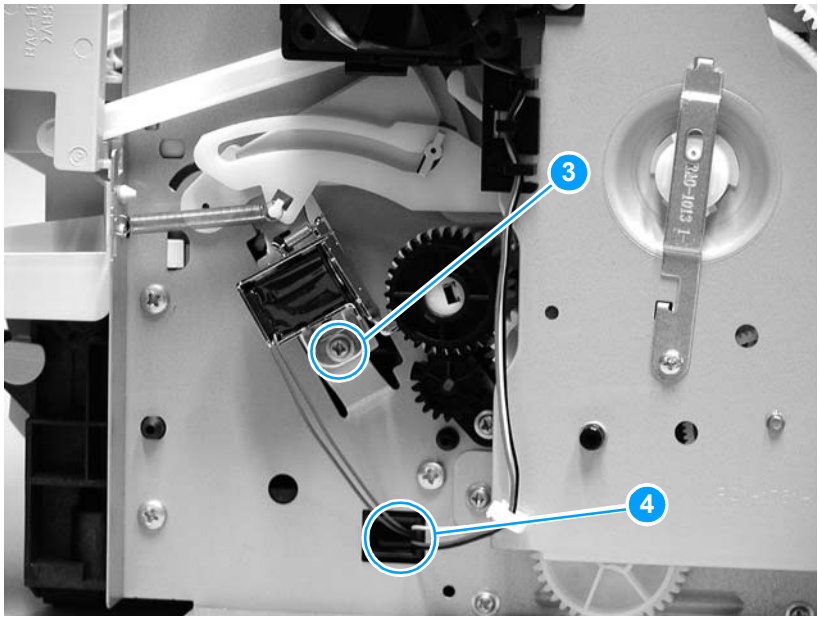


Figure 55. Removing the solenoid (2 of 2)

To reinstall

It might be easier to remove the ECU pan (see “ECU” on page 127) before rerouting the cables through the hole (callout 4) in the right side plate.

Fan assembly

1 Remove the left side cover (see “Left side cover” on page 81).

2 Remove the back cover (see “Back cover” on page 82).

3 Remove the right side cover (see “Right side cover” on page 84).

4 Remove the top cover (see “Top cover” on page 87).

5 Unplug the six cable connectors (callout 1) from the ECU and separate the fan cable from the other five cables.

6 Carefully unwind the fan cable from the cable guides (callout 2).

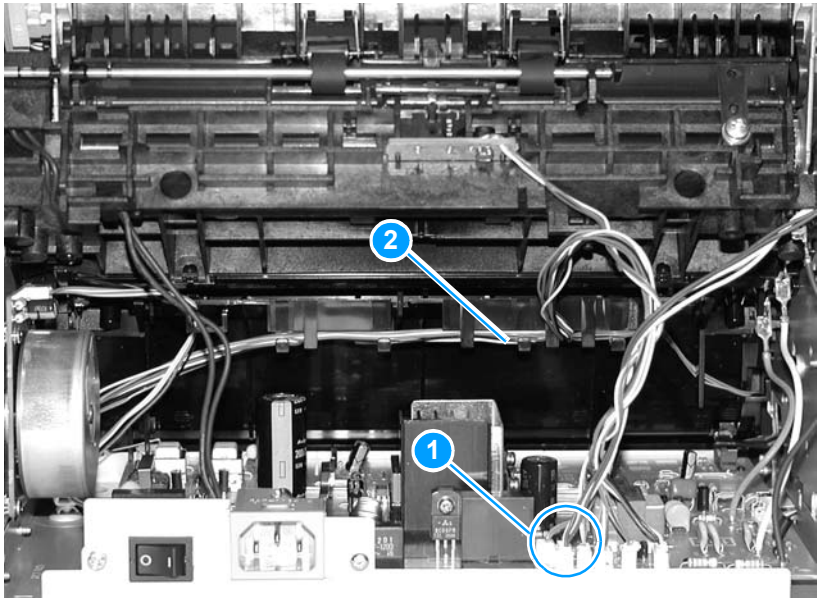


Figure 56. **Removing the fan (1 of 2)**

7 Remove two screws (callout 3).

8 Remove the fan assembly.

9 Gently thread the fan cable through the hole (callout 4) in the right side plate.

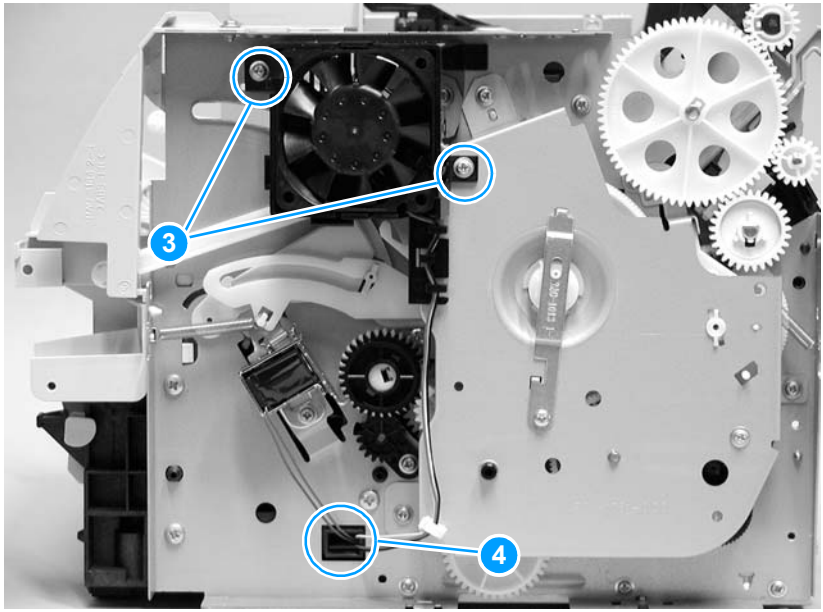


Figure 57. **Removing the fan (2 of 2)**

To reinstall

It might be easier to remove the ECU pan (see “ECU” on page 127) before rerouting the cables through the hole (callout 4) in the right side plate.

Right plate assembly

1 Remove the left side cover (see “Left side cover” on page 81).

2 Remove the back cover (see “Back cover” on page 82).

3 Remove the right side cover (see “Right side cover” on page 84).

4 Remove the top cover (see “Top cover” on page 87).

5 Remove the front cover (see “Front cover” on page 89).

6 Remove the print cartridge door (see “Print cartridge door” on page 91).

7 Remove the front guide assembly (see “Front guide assembly” on page 93).

8 Remove the fuser (see “Fuser assembly” on page 103).

9 Remove the solenoid (see “Solenoid” on page 111).

10 Remove the fan assembly (see “Fan assembly” on page 113).

CAUTION **In the next step, make sure that the two halves of the clutch stay together. If they separate, you might lose the clutch spring that connects the two halves. (See the inset in Figure 58.)**

11 Press the small white tab to release the clutch (callout 1), and, from the outside of the printer, slide the clutch off the shaft.

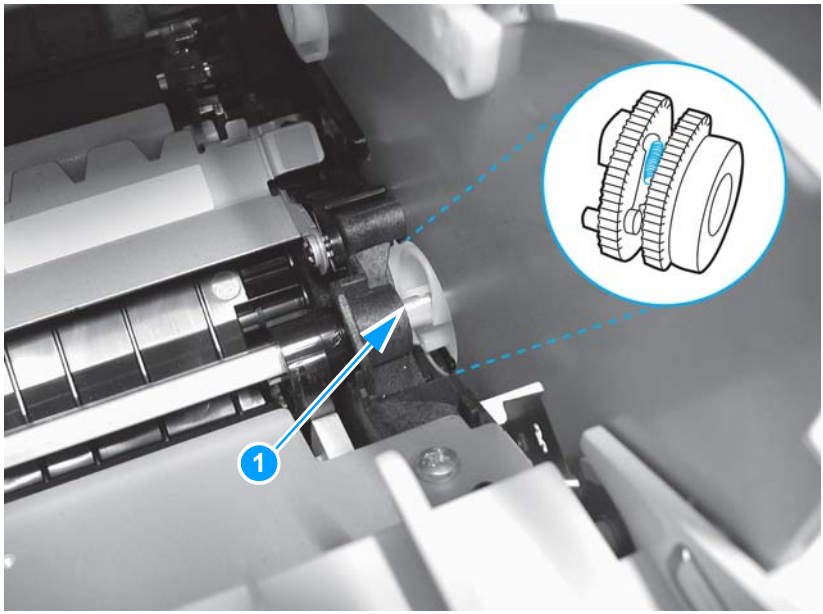


Figure 58. **Removing the right plate assembly (1 of 3)**

12 From the back of the printer, remove the screw above the motor (callout 2).

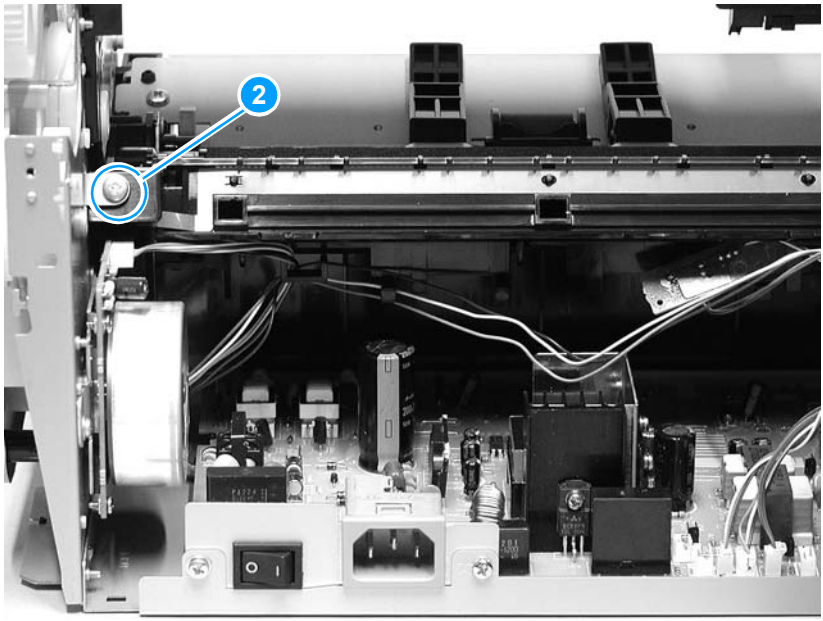


Figure 59. **Removing the right plate assembly (2 of 3)**

13 Remove nine screws (callout 3).

14 Lift the right plate assembly off of the printer.

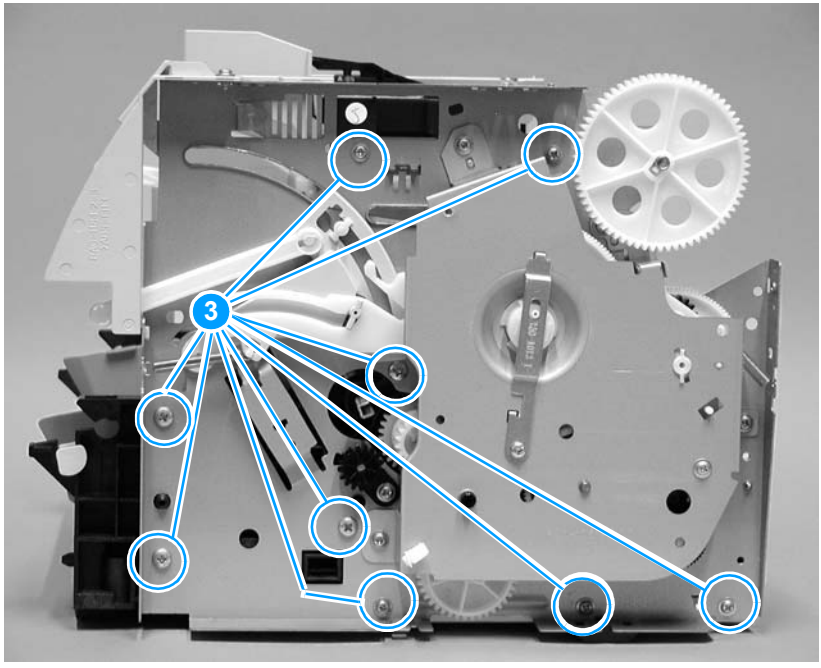


Figure 60. **Removing the right plate assembly (3 of 3)**

Pickup assembly

1. Remove the left side cover (see “Left side cover” on page 81).
2. Remove the back cover (see “Back cover” on page 82).
3. Remove the right side cover (see “Right side cover” on page 84).
4. Remove the top cover (see “Top cover” on page 87).
5. Remove the front cover (see “Front cover” on page 89).
6. Remove the print cartridge door (see “Print cartridge door” on page 91).
7. Remove the front guide assembly (see “Front guide assembly” on page 93).
8. Remove the formatter [see “Formatter (hp LaserJet 1300 series)” on page 97, or see “Formatter (hp LaserJet 1150 printer)” on page 99].
9. Remove the right plate assembly (see “Right plate assembly” on page 115).
10. Remove one screw (callout 1).

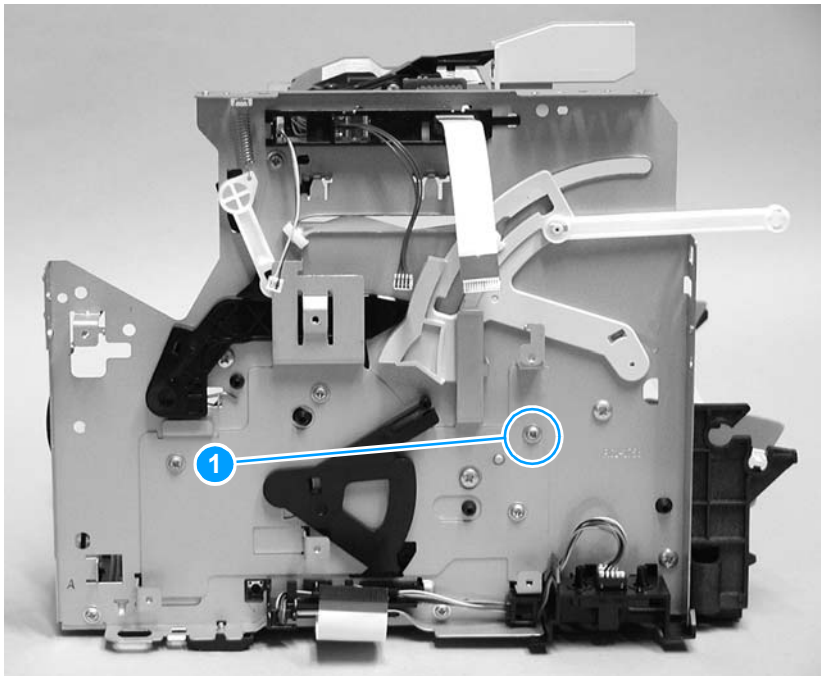


Figure 61. **Removing the pickup assembly (1 of 3)**

11 Remove two screws (callout 2) on the top of the assembly.

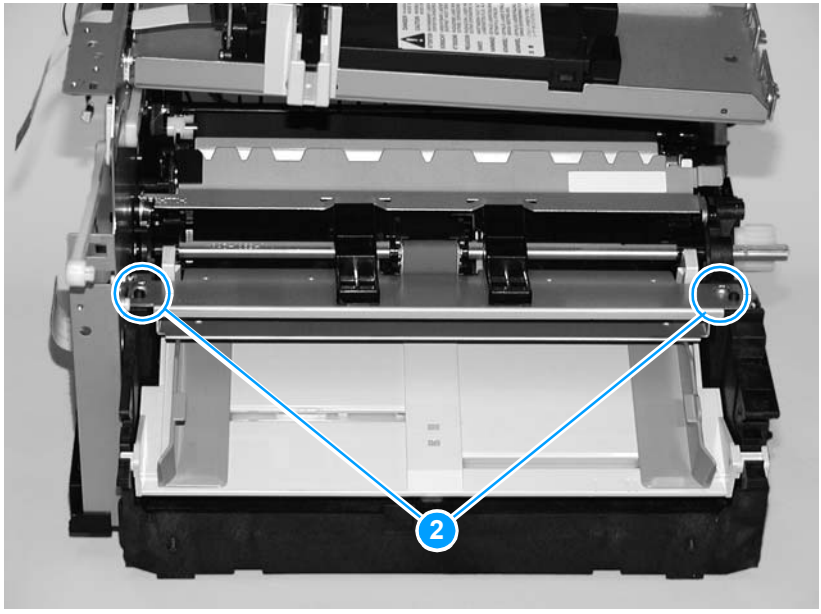


Figure 62. **Removing the pickup assembly (2 of 3)**

12 Lift the upper metal shield (callout 3) straight up and remove it from the printer.

13 Lift the lower metal shield (callout 4) straight up and remove it from the printer.

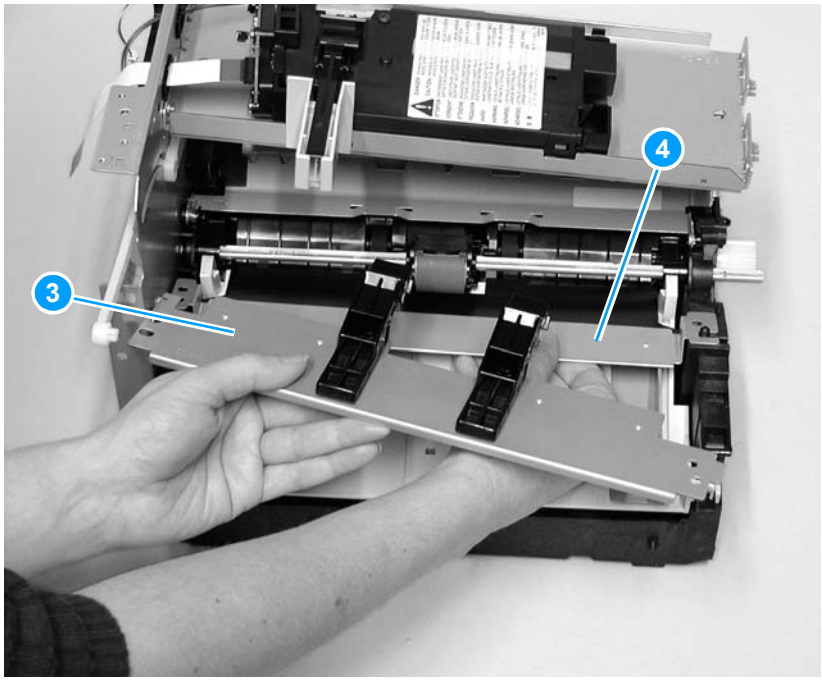


Figure 63. **Removing the pickup assembly (3 of 3)**

Pickup roller shaft

1. Remove the left side cover (see “Left side cover” on page 81).
2. Remove the back cover (see “Back cover” on page 82).
3. Remove the right side cover (see “Right side cover” on page 84).
4. Remove the top cover (see “Top cover” on page 87).
5. Remove the front cover (see “Front cover” on page 89).
6. Remove the print cartridge door (see “Print cartridge door” on page 91).
7. Remove the front guide assembly (see “Front guide assembly” on page 93).
8. Remove the right plate assembly (see “Right plate assembly” on page 115).
9. Remove the pickup assembly (see “Pickup assembly” on page 118).
10. On the cam on the pickup roller shaft, unhook the tab (callout 1) and slide the cam to the left to allow clearance for moving the shaft.

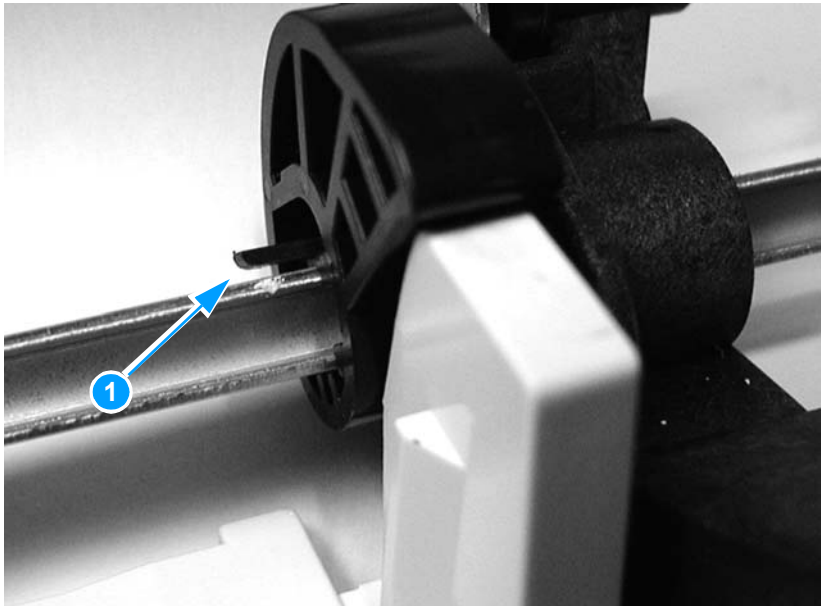


Figure 64. **Removing the pickup roller shaft (1 of 2)**

11 Keeping the shaft low, slide it toward the right until the left end (callout 2) releases.

12 Carefully pull the left end of the shaft toward you until it clears the left side of the chassis.

13 Pull the shaft to the left and out of the printer.

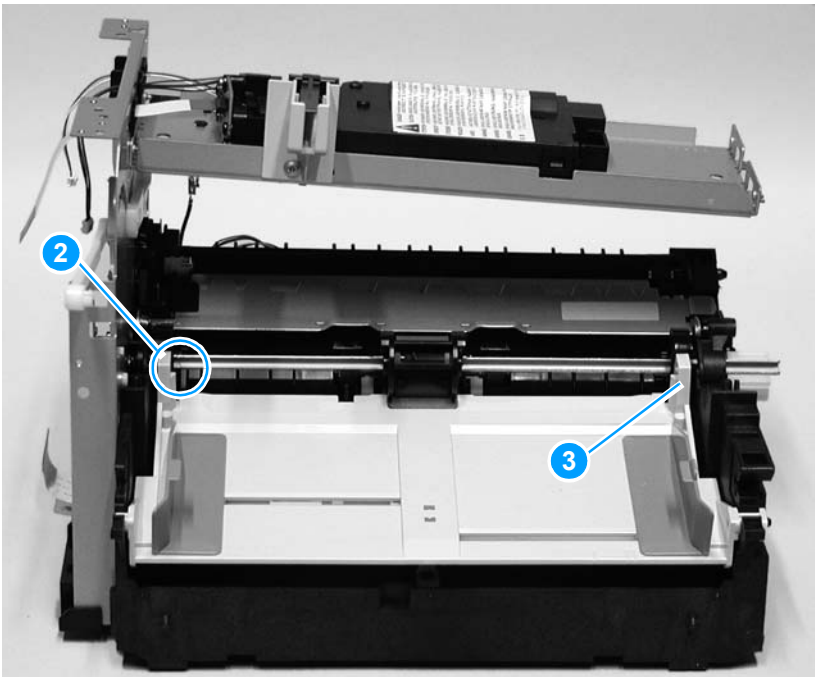


Figure 65. **Removing the pickup roller shaft (2 of 2)**

To reinstall

Be sure to align the clutch on the pickup roller shaft with the follower (large plastic tab) (callout 3) on the paper lift plate, so it is in the position shown in figure 64 on page 121.

Paper lift plate assembly

1. Remove the left side cover (see “Left side cover” on page 81).
2. Remove the back cover (see “Back cover” on page 82).
3. Remove the right side cover (see “Right side cover” on page 84).
4. Remove the top cover (see “Top cover” on page 87).
5. Remove the front cover (see “Front cover” on page 89).
6. Remove the print cartridge door (see “Print cartridge door” on page 91).
7. Remove the front guide assembly (see “Front guide assembly” on page 93).
8. Remove the right plate assembly (see “Right plate assembly” on page 115).
9. Remove the pickup assembly (see “Pickup assembly” on page 118).
10. Remove the pickup roller shaft (see “Pickup roller shaft” on page 121).

11 Grasp the large plastic tabs (callout 1) on each side of the paper lift plate and rotate it forward.

Note

Do not pull on the paper guides.

Make sure you do not misplace the two large springs (callout 2) that are under the lift plate or the small spring that is under the separation pad arm.

12 Lift the paper lift plate straight up and out of the bushings (callout 3).

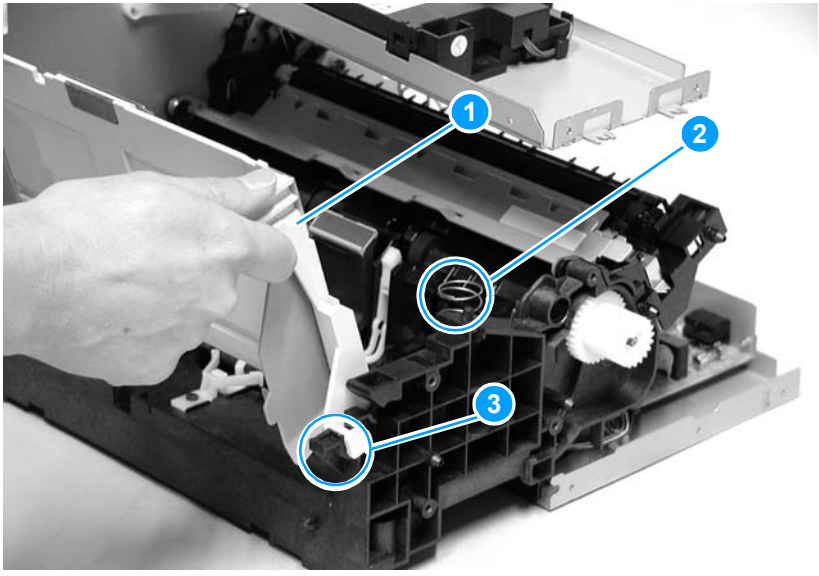


Figure 66. Removing the paper lift plate assembly

To reinstall

Make sure that the vertical paper sensor (the narrow black plastic piece to the left of the separation pad arm) is in an upright position and that the lift plate springs are positioned properly.

Left plate assembly

1. Remove the left side cover (see “Left side cover” on page 81).
2. Remove the back cover (see “Back cover” on page 82).
3. Remove the right side cover (see “Right side cover” on page 84).
4. Remove the top cover (see “Top cover” on page 87).
5. Remove the front cover (see “Front cover” on page 89).
6. Remove the print cartridge door (see “Print cartridge door” on page 91).
7. Remove the front guide assembly (see “Front guide assembly” on page 93).
8. Remove the formatter [see “Formatter (hp LaserJet 1300 series)” on page 97, or see “Formatter (hp LaserJet 1150 printer)” on page 99].

9 Unthread the connector wires and ribbon cable from the top of the printer frame (callout 1).

10 Disconnect the connector (callout 2) from the optional tray connector block at the bottom of the printer, and slide the connector block forward and then straight out. Unthread the connector wires from the stay.

11 Remove eight screws (callout 3). If you have not already removed the fuser, remove the fuser screw (callout 4).

12 Lift the left plate assembly off of the printer.

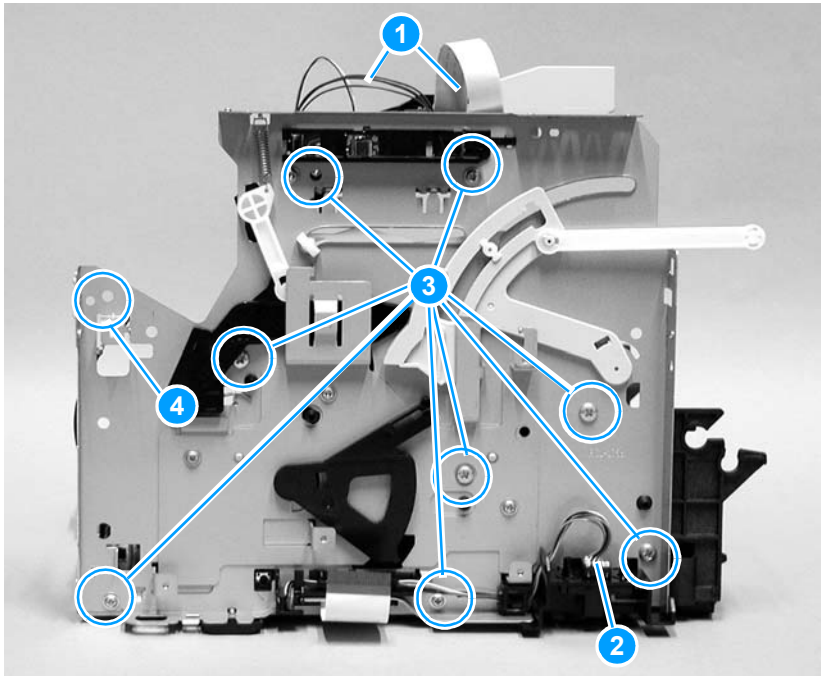


Figure 67. **Removing the left plate assembly**

Bottom assemblies

ECU

1. Remove the left side cover (see “Left side cover” on page 81).
2. Remove the back cover (see “Back cover” on page 82).
3. Remove the right side cover (see “Right side cover” on page 84).
4. Remove the formatter. [See “Formatter (hp LaserJet 1300 series)” on page 97, or see “Formatter (hp LaserJet 1150 printer)” on page 99.]
5. Unplug the three spade connectors (callout 1).
6. Disconnect the motor cable connector (callout 2) on the side of the motor.
7. Unplug the fuser cable connector (callout 3) by pressing and releasing the tab on the back of the connector.
8. Unplug all other cable connectors (callout 4) from the ECU.

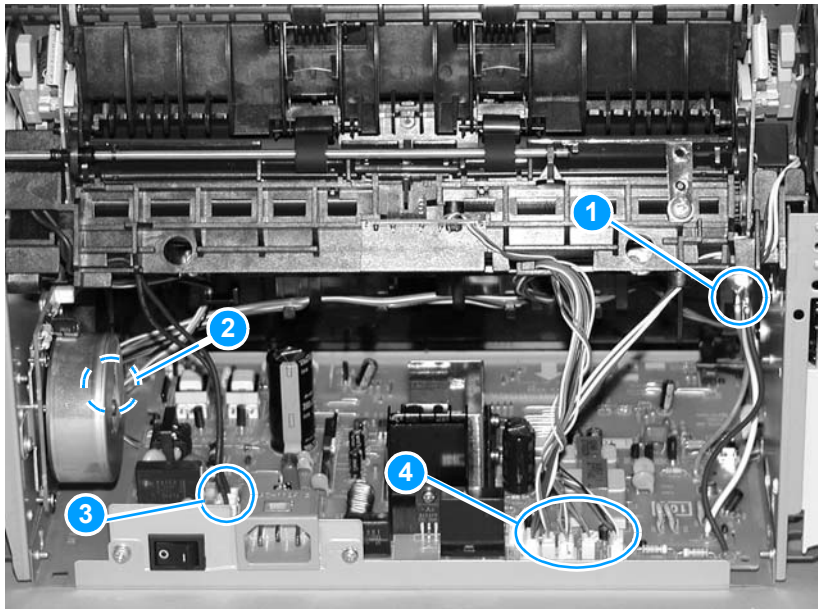


Figure 68. **Removing the ECU (1 of 5)**

9 Unplug the flat flexible cable (callout 5) on the formatter.

10 Remove two screws (callout 6) on the left side of the printer and disconnect the two connectors (callout 7).

11 Remove the connector block (callout 8), and unthread the connector cables. (See step 10 of “Left plate assembly” on page 125 for more information.)

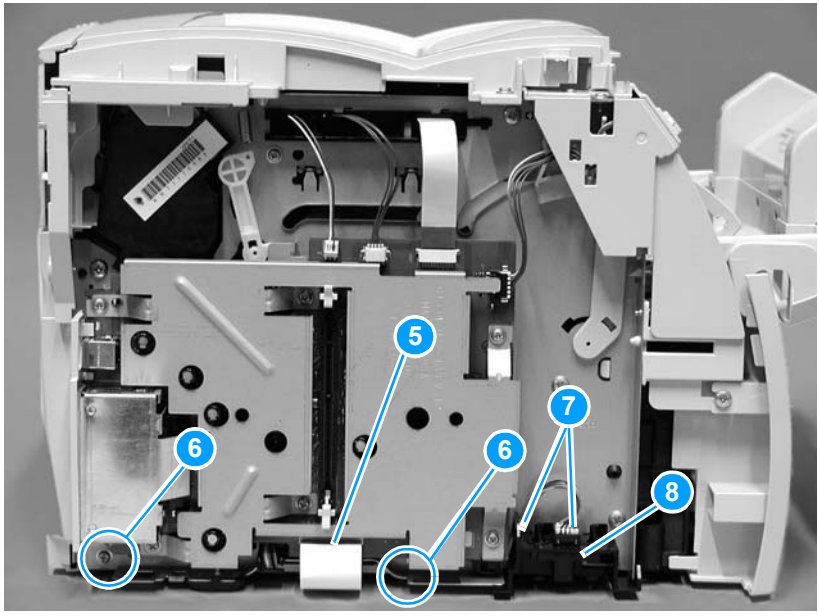


Figure 69. **Removing the ECU (2 of 5)**

12 Remove three screws (callout 9) on the right side of the printer.

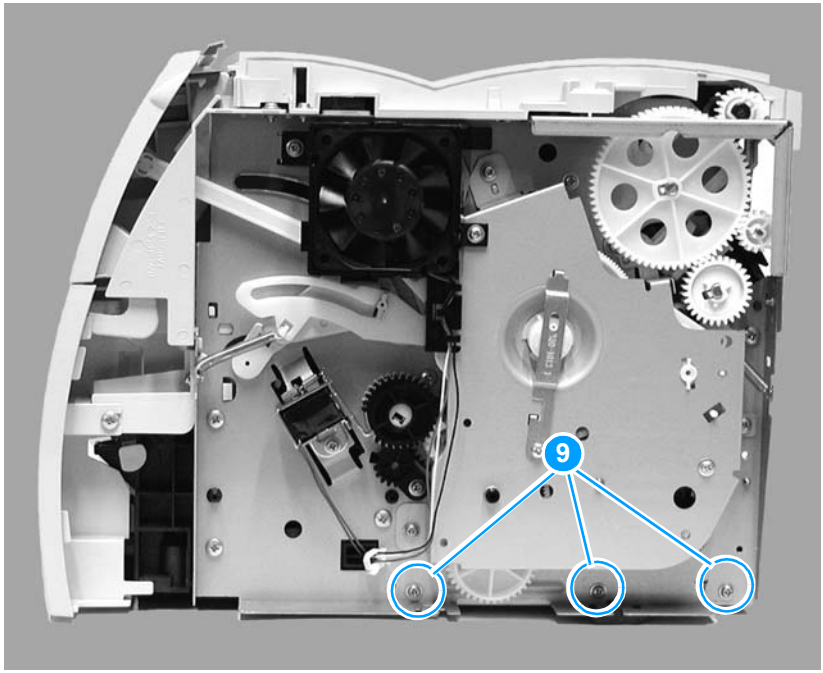


Figure 70. **Removing the ECU (3 of 5)**

13 Gently pull the two sides of the printer away from the ECU pan to release the ECU pan.

14 Slide the ECU pan out and away from the printer.

Note The entire ECU board can be replaced as a single unit. (Only soldered cables ship with the replacement board; if other cables are damaged during removal, you will have to purchase new ones.)

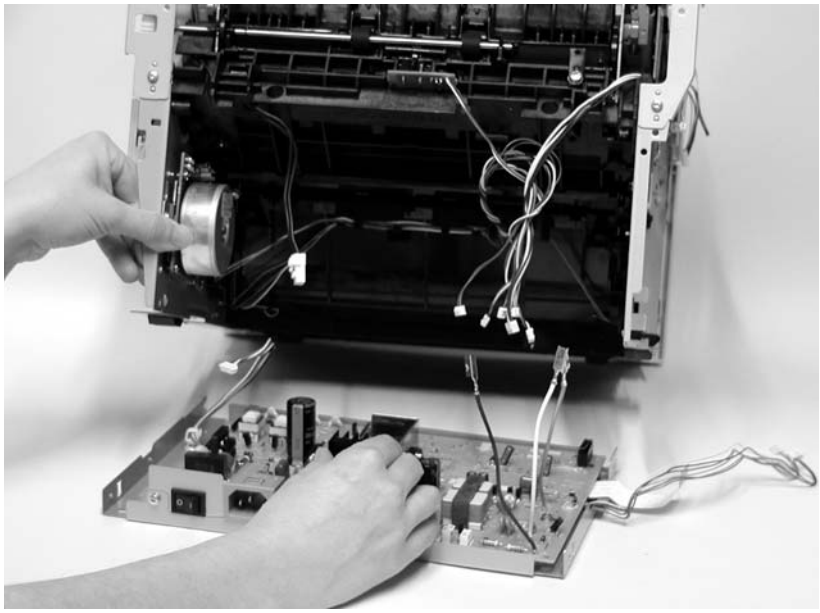


Figure 71. Removing the ECU (4 of 5)

15 Remove five screws (callout 10).

16 Lift the ECU out of the ECU pan.

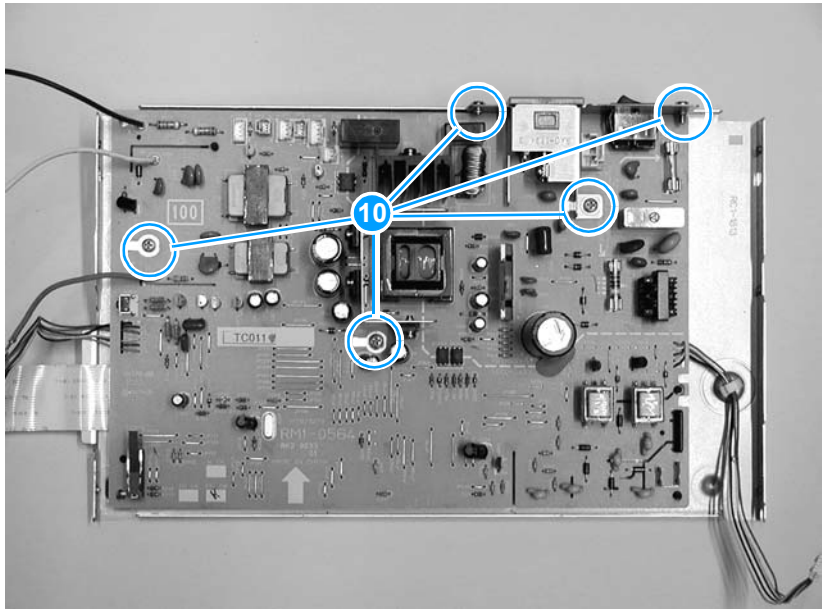


Figure 72. **Removing the ECU (5 of 5)**

Paper feed assembly

1. Remove the left side cover (see “Left side cover” on page 81).
2. Remove the back cover (see “Back cover” on page 82).
3. Remove the right side cover (see “Right side cover” on page 84).
4. Remove the right plate assembly (see “Right plate assembly” on page 115).
5. Remove the pickup assembly (see “Pickup assembly” on page 118).
6. Remove the left plate assembly (see “Left plate assembly” on page 125).
7. Remove the ECU pan (see “ECU” on page 127).

Note At this point, the black paper feed assembly, shown in Figure 73, should come loose.

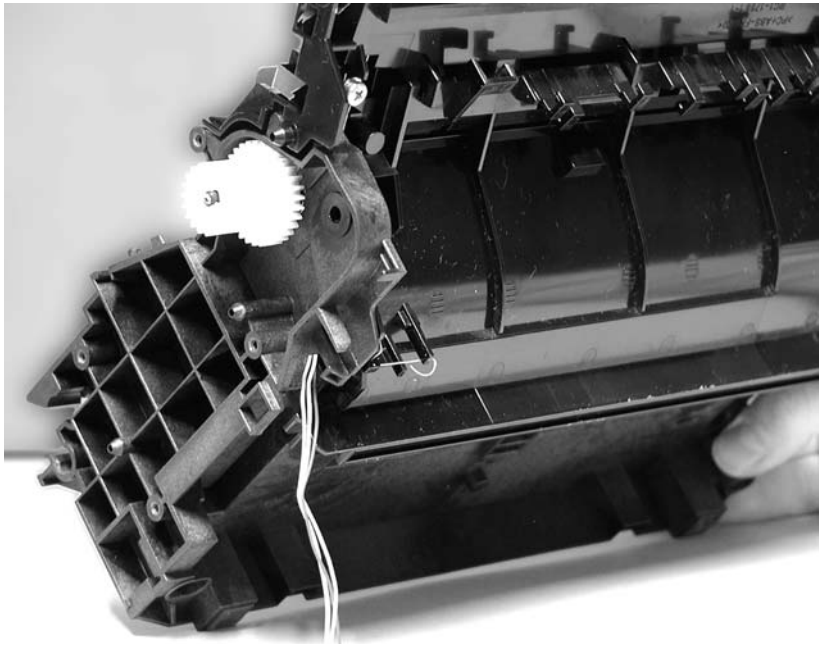


Figure 73. Removing the paper feed assembly

Paper-feed roller

1. Remove the left side cover (see “Left side cover” on page 81).
2. Remove the back cover (see “Back cover” on page 82).
3. Remove the right side cover (see “Right side cover” on page 84).
4. Remove the right plate assembly (see “Right plate assembly” on page 115).
5. Remove the pickup assembly (see “Pickup assembly” on page 118).
6. Remove the left plate assembly (see “Left plate assembly” on page 125).
7. Remove the ECU pan (see “ECU” on page 127).
8. Remove the paper feed assembly (see “Paper feed assembly” on page 132).
9. On the back of the paper feed assembly, unhook the wire clip (callout 1).

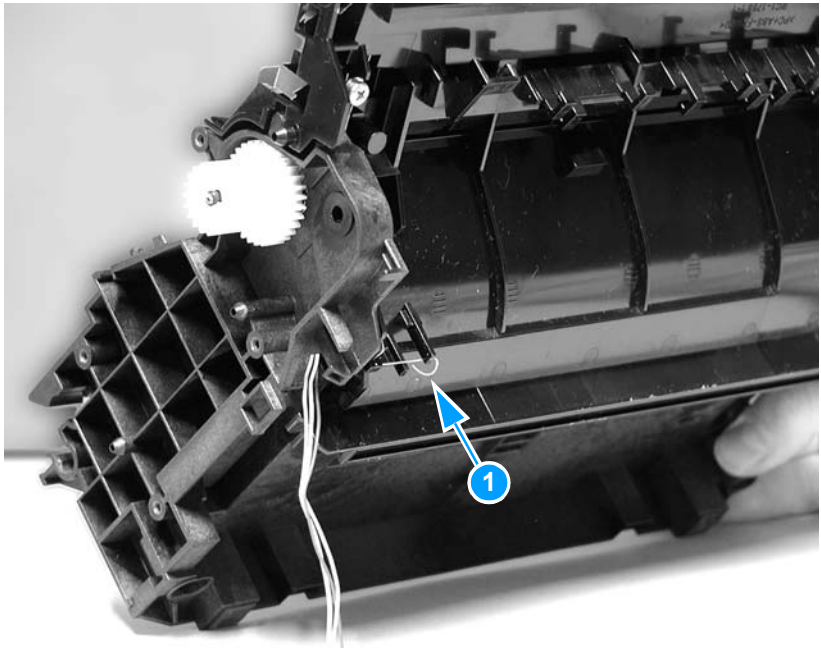


Figure 74. **Removing the paper-feed roller (1 of 5)**

10 Remove the two large springs at either end of the paper feed assembly (in the location of callout 2) and set them aside. Be careful not to lose them.

11 Tilt the right end of the transfer roller assembly down, and push back (callout 3). The left end of the transfer roller assembly comes free. Set the transfer roller assembly aside.

12 Remove the two screws (callout 4) on the paper feed assembly.

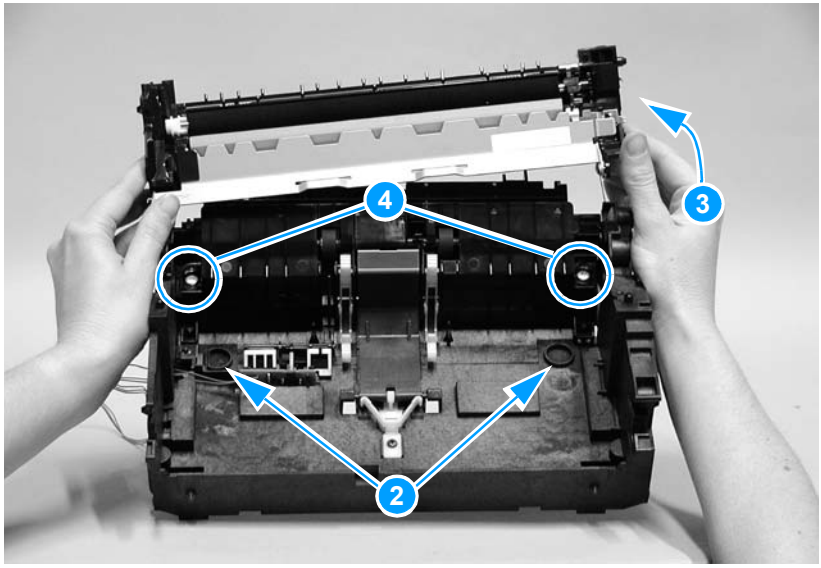


Figure 75. **Removing the paper-feed roller (2 of 5)**

13 Lift the paper guide assembly up and out of the printer.

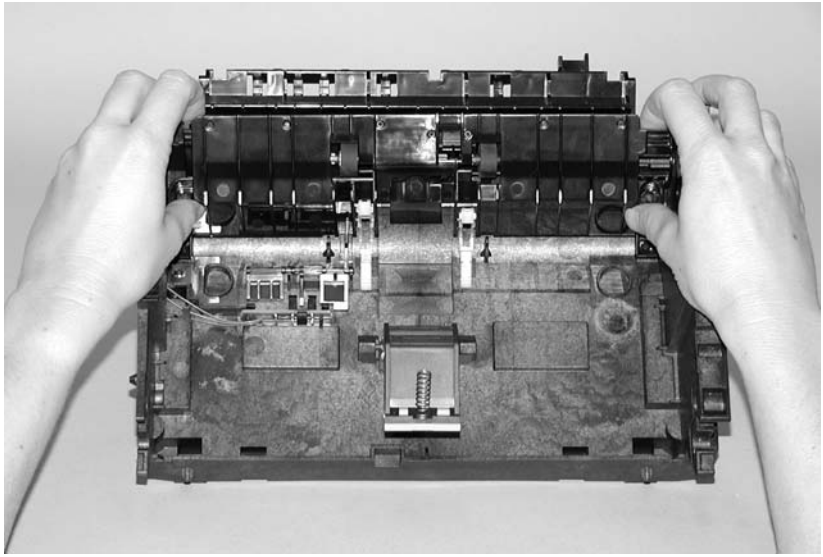


Figure 76. **Removing the paper-feed roller (3 of 5)**

14 Use needle-nose pliers to push the two tabs away from the end of the paper-feed roller shaft (callout 5).

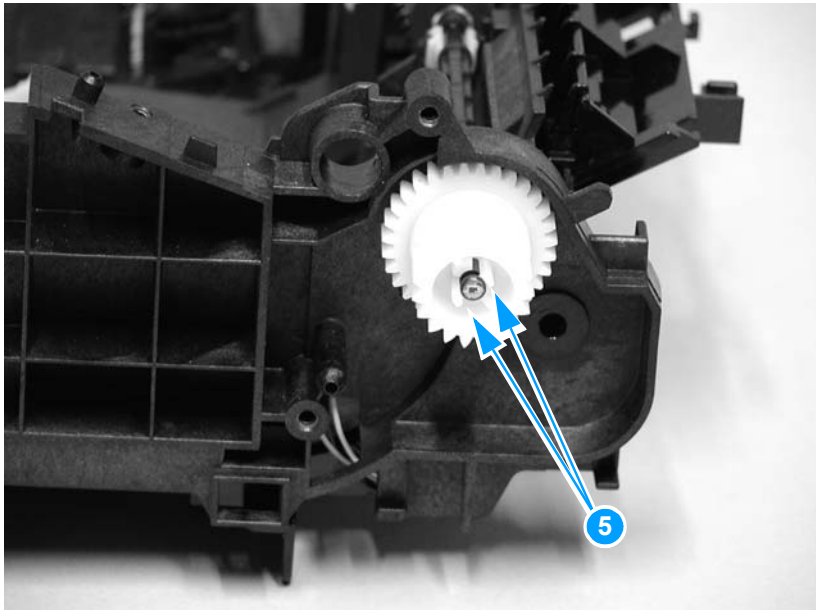


Figure 77. **Removing the paper-feed roller (4 of 5)**

15 Pull the gear set and spring straight off.

Figure 78. **Removing the paper-feed roller (5 of 5)**

16 Pull the paper-feed roller shaft toward the left side of the printer, and remove it.

To reinstall

When reinstalling the paper-feed roller, be sure to align the white plastic bushings with their supports (callout 1).

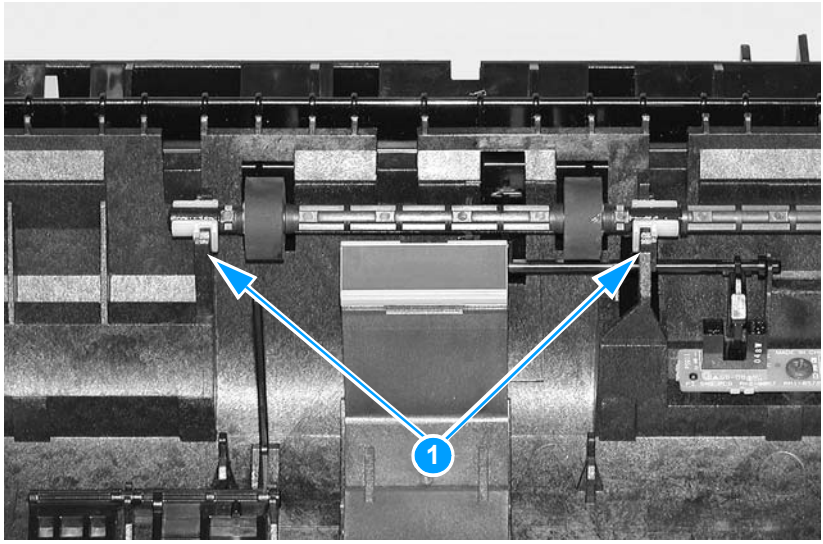


Figure 79. **Reinstalling the paper-feed roller**

6 Troubleshooting

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Basic troubleshooting

Table 13. Basic troubleshooting

#	Verification steps	Possible problems	Solutions
1	**Does the printer turn on successfully?** When the product is connected to a grounded power source, the printer motor should rotate for approximately five seconds.	No power (no LEDs are lit).	1. Verify that the product is plugged in. 2. Verify that the power cable is functional and that the power switch is on. 3. Verify that FU102 on the ECU is not open. 4. If all of these conditions are correct, replace the ECU.
		Printer motor does not rotate.	1. Verify that the print cartridge is present. (See “Print cartridge” on page 76 for more information.) 2. Verify that the printer door is closed. 3. Verify that media is loaded in the main input tray. 4. Verify there are no paper jams. 5. Verify that the printer paper path and door sensors are functional. 6. Verify that the motor connector is seated into the ECU. 7 Verify that the motor is correctly mounted on the printer chassis. 8. If all of these conditions are correct, replace the ECU. 9. If, after replacing the ECU, the printer motor still does not rotate, replace the motor.
2	**Is the product ready?** The control panel should function without error light patterns.	Control panel displays an error light pattern.	Consult the list of control panel light patterns later in this chapter to identify and correct the error.
		Control panel is not functional.	1. Verify that the control panel cable is seated in the formatter. 2. If the cable is connected correctly, replace the control panel.
3	**Do engine tests and self-test pages print?** Print an engine test. (See “Engine test” on page 156.)The engine test should print without paper-feed problems or print-quality problems.	**Note**	The formatter must be connected to perform an engine test.
		Engine test is not successful.	Replace the ECU.
		Control panel displays an error light pattern.	See “Control panel light messages” on page 142 to identify and correct the error.
		Media does not move smoothly through the printer paper path.	Isolate printer paper-path problems by performing a paper-path check, which is discussed later in this chapter.
		Poor print quality.	See “Solving image-quality problems” on page 149.

Table 13. Basic troubleshooting (continued)

#	Verification steps	Possible problems	Solutions
4	**Is the software installed correctly?**	Software is not installed, or an error occurred during software installation.	Uninstall and then reload the product software. Make sure you use the correct installation procedure and the correct port setting.
5	**Does the product print from the computer?** Connect the parallel cable or USB cable to the product and the computer. Use a word-processing application to send a print job to the printer.	The cable is not connected correctly.	Reconnect the cable.
		An incorrect printer driver is selected.	Select the correct printer driver.
		Other devices are connected to the parallel or USB port.	Disconnect the other devices and try again to print.
		There is an LPT port driver problem.	Reset the computer port settings. See your computer user guide for instructions.
		The formatter has failed.	Replace the formatter

Control panel light messages

Each control panel light message is listed, along with possible causes and steps to resolve identified errors.

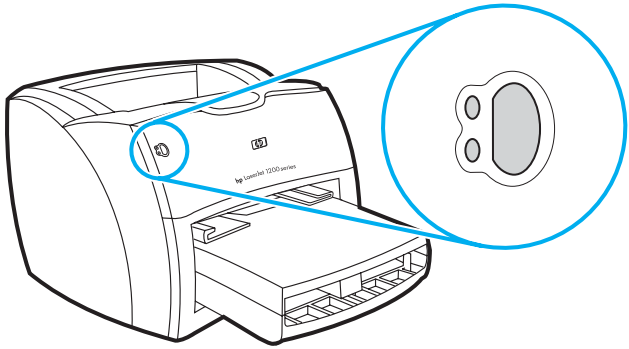


Figure 80. **Control panel location**

Table 14. Control panel lights legend

Light symbol	Meaning of symbol
	Light off
	Light on
	Light blinking

Table 15. Control panel light messages

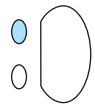
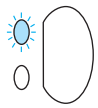
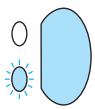
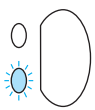
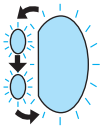
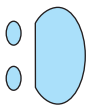
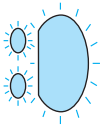
Message	Possible causes	Solutions
	**Ready**. The printer is ready to print.	No action is needed. To print a self-test page, press and release the Go button on the control panel.
	**Processing**. The printer is receiving or processing data.	Wait for the job to print.
	**Continuable error**. The printer is in manual feed mode.	To turn off the manual feed mode, change the printer property setting. See the “Printer properties” section in the user guide for more information.
	The printer is out of memory.	1. The page currently printing might be too complex for the printer memory. To continue printing, press and release the Go button. The printer might print a partial page, or the quality might be lower than normal. 2. Lower the resolution. See the “Understanding print quality settings” section in the user guide. 3. Add more memory. See the “Memory” section in the user guide.
	**Attention state**. The printer has an error. The door is open, the media is out, the print cartridge is installed incorrectly, or the paper is jammed.	1. Check that the print cartridge door is completely closed. 2. Load media into the correct input tray. 3. Check that the print cartridge is correctly installed in the printer. (See “Print cartridge” on page 76 for more information.) 4. There is a paper jam. (See “Functional checks” on page 156 for more information.) 5. Check that the door and print cartridge interlocks are operating correctly. (See “Paper path check” on page 162 for more information about the door interlock.

Table 15. Control panel light messages (continued)

Message	Possible causes	Solutions
	**Initialization/Job cancel**. A printer initialization is taking place. If all lights blink for a half second or longer in a sequence: • The printing is initializing. • All previously sent print jobs are being deleted from the printer memory. • A cleaning page is printing.	No action is necessary.
	**Fatal error**. The printer has a fatal error. All lights are on.	1. Turn the printer off and back on. 2. Unplug the printer for 5 minutes, plug it back in, and turn it on. 3. If the printer still has an error, press the Go button, and see table 16, “Fatal error secondary messages,” on page 145.
	**Accessory error**. The printer has an accessory error. All lights are blinking.	1. Remove the DIMM and reseat it. 2. If the printer still has an error, replace the DIMM.

Fatal error secondary messages

If the printer has a fatal error, press and hold the Go button to see the secondary error message.

Table 16. Fatal error secondary messages

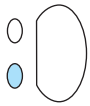
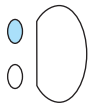
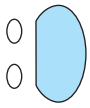
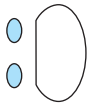
Message	Cause	Solution
	**Engine error.** The formatter and engine are not communicating.	1. Unplug the printer and plug it back in. 2. Reseat the formatter to ECU cable. 3. Replace the formatter PCA. 4. Replace the ECU. (See “ECU” on page 127.)
	**Laser/scanner error.** The laser/scanner has a malfunction.	1. Check the laser/scanner cable connections. 2. Replace the laser/scanner.
	**Beam error.**	1. Check the laser/scanner cable connections. 2. Replace the laser/scanner. (See “Laser/scanner assembly” on page 101.)
	**Motor error.**	1. Check the motor cable connections. 2. Replace the motor. (See “Motor” on page 110.)

Table 16. Fatal error secondary messages (continued)

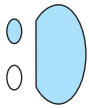
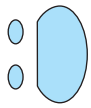
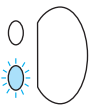
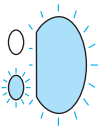
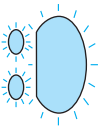
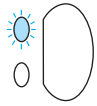
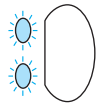
Message	Cause	Solution
	**Fuser error.** The fuser has a malfunction.	1. Unplug the printer and do not plug it back in for at least ten minutes. 2. Verify that the fuser connector and the thermistor connector are both firmly seated in the ECU. 3. Perform a heating element resistance check. (See “Heating element check” on page 159.) 4. If the resistance readings are correct and the error persists, replace the fuser. (See “Fuser assembly” on page 103)
	**Formatter internal RAM or ROM error.** The RAM or ROM has an error.	1. Unplug the printer and plug it back in. 2. Unplug the printer, remove any optional memory, and turn the printer back on. 3. Check the formatter cable connections. 4. Replace the formatter. (See “Formatter (hp LaserJet 1300 series)” on page 97 or “Formatter (hp LaserJet 1150 printer)” on page 99.)
	**Fan error**.	1. Check the fan cable connections. 2. Replace the fan. (See “Fan assembly” on page 113.)
	**Miscellaneous hardware interface error.**	1. Check the I/O connections. 2. If an additional 250-sheet paper feeder is installed (HP LaserJet 1300), verify that the printer is properly seated over the paper feeder.
	**General fatal error**	1. Unplug the printer and plug it back in. 2. Disconnect the I/O cable and print a self-test page. If the self-test is successful, reconnect the I/O cable. 3. If the error persists, replace the formatter PCA. (See “Formatter (hp LaserJet 1300 series)” on page 97)

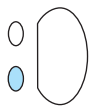
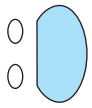
Table 16. Fatal error secondary messages (continued)

Message	Cause	Solution
	**NVRAM error**	1. Press the Go button to continue printing. 2. Turn the printer off and then back on. 3. If the error persists, replace the formatter board.
	**DRAM controller error**	1. Turn the printer off and then back on. 2. If the error persists, replace the formatter board.

Accessory error secondary messages

If the printer has an accessory error (indicated by all lights blinking), press and hold the Go button to see the secondary error message.

Table 17. Accessory error secondary messages

Message	Cause	Solution
	**LIO port error (HP LaserJet 1300)**	1. Remove the accessory in the LIO slot and reseat it. 2. If the error persists, replace the accessory.
	**DIMM slot error (HP LaserJet 1300)**	1. Check to see that the DIMM is properly seated. 2. If the error persists, replace the DIMM.

Checking the print cartridge

Image formation defects are many times the result of problems in the print cartridge. If there is any doubt, always replace the print cartridge before troubleshooting image defects.

Use the following checklist to make sure that the print cartridge is still operable.

- ☐ Make sure that the print cartridge is seated properly.
- ☐ Inspect the print cartridge for toner level.
- ☐ Check the print cartridge to see if it has been disassembled or refilled.
- ☐ Inspect the print cartridge to see if toner is leaking through worn seals.
- ☐ Check the surface of the photosensitive drum in the cartridge to see if it has been damaged or scratched. Touching the drum contaminates the photosensitive surface and can cause spotting and image defects.
- ☐ Blurred areas on printed pages indicate that the photosensitive drum in the cartridge has been overexposed to light. Because overexposure to light causes permanent damage to the photosensitive drum, the cartridge should be replaced.

To redistribute toner in the cartridge

Before installing a new cartridge or when toner begins to run low, redistribute the toner by rotating the cartridge back and forth five or six times.

Solving image-quality problems

Use the following tables to help solve problems with printed pages.

If the problem occurs when printing, see table 18, “Solving print image-quality problems,” on page 149.

Also, see table 19, “Solving paper-feed problems,” on page 154.

Solving print image-quality problems

Table 18. Solving print image-quality problems

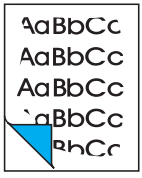
Problem	Cause	Solution
Pages do not print.	The printer is not plugged in.	Make sure that the printer is plugged into a live wall outlet or power strip.
	The computer cable is loose.	Check that the parallel cable between the printer and the computer is securely connected.
	The tape was not removed from the print cartridge.	Remove the print cartridge, remove the tape, and return the print cartridge. (See “Print cartridge” on page 76.)
	The print cartridge is out of toner.	Replace the print cartridge. (See “Print cartridge” on page 76.)
	The media you are using does not meet HP’s specifications (for example, it is too moist or too rough).	Make sure that the media meets specifications detailed in the *Print Media Guide* for the HP LaserJet printer family.
Parts of the page around the edges are not printing. 	The printer cannot print to the edge of the paper. The printer has minimum margins on each edge of 4.23 mm (0.167 inches.	To get the image to fit into this printable area, slightly reduce the size of the image.
	The reduction setting is set incorrectly.	Check the reduction setting in the “Print” or “Setup” window from within the program you are using.

Table 18. Solving print image-quality problems (continued)

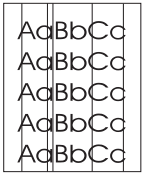
Problem	Cause	Solution
Toner specks appear on the printed page. 	The media you are using does not meet HP's specifications (for example, it is too moist or too rough).	Make sure that the media meets specifications detailed in the *Print Media Guide* for the HP LaserJet printer family.
	The printer needs to be cleaned.	Clean the printer. (See "Cleaning the print path" on page 46.)
Characters are only partially printed (also referred to as dropouts). 	A single sheet of paper is defective.	Try reprinting the job.
	The print density needs to be adjusted.	Adjust the print density from the device configuration utility.
	The moisture content of the paper is inconsistent, or the paper has moist or wet spots on the surface.	Make sure that the media meets specifications detailed in the *Print Media Guide* for the HP LaserJet printer family.
	The paper was damaged by inconsistent manufacturing processes.	Make sure that the media meets specifications detailed in the *Print Media Guide* for the HP LaserJet printer family.
	EconoMode is selected in the software.	Try the normal or best setting.
	The print cartridge is defective.	Replace the print cartridge.
Vertical lines appear on the printed page. 	The priority input tray is not in place.	Adjust the priority input tray.
	The photosensitive drum inside the print cartridge is scratched.	Replace the print cartridge.
	The fuser is damaged or has an obstruction.	Replace the fuser.

Table 18. Solving print image-quality problems (continued)

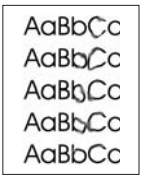
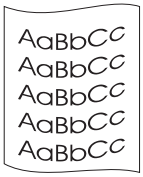
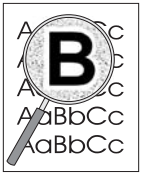
Problem	Cause	Solution
The printed page has a gray background. 	The priority input tray is not in place.	Adjust the priority input tray.
	The print density setting is set too high.	Decrease the amount of background shading through the device configuration utility.
	The media basis weight is too high.	Change the media to a lower basis weight.
	The humidity level is too low.	Very low humidity can increase the amount of background shading. Move the printer to a different location, or decrease the background shading through the device configuration utility.
	The print cartridge needs to be replaced.	Replace the print cartridge.
Toner smears appear on the printed page. 	If the toner smears appear on the leading edge of the media, the media guides are dirty.	Wipe the media guides with a dry, lint-free cloth.
	The media you are using does not meet HP's specifications (for example, it is too moist or too rough).	Make sure that the media meets specifications detailed in the *Print Media Guide* for the HP LaserJet printer family.
	The print cartridge needs to be replaced.	Replace the print cartridge.
	The fuser temperature is too low.	Select **Optimize for:** in the **Paper** tab of the printer driver. Make sure that it is set for the appropriate media.
The toner is loose, and it does not stay attached to the printed page. 	The inside of the printer is dirty.	Clean the printer. (See "Cleaning the print path" on page 46.)
	The media you are using does not meet HP's specifications (for example, it is too moist or too rough).	Make sure that the media meets specifications detailed in the *Print Media Guide* for the HP LaserJet printer family.
	The print cartridge needs to be replaced.	Replace the print cartridge.
	The printer driver is not set for the correct media.	1. Select **Optimize for:** in the **Paper** tab of the printer driver. Select the correct media. 2. Select the correct media through the device configuration utility.
	The power strip is not working correctly.	Plug the printer directly into an AC outlet.

Table 18. Solving print image-quality problems (continued)

Problem	Cause	Solution
Repetitive vertical defects appear on the printed page. 	If the repetitive mark occurs at equal distance between marks, either the print cartrige or a printer roller is damaged.	Use the defect ruler to identify the spacing. Check the appropriate component and replace if necessary. (See “Repetitive image defect ruler” on page 170)
	The internal parts have toner on them.	If the defects occur on the back of the page, the problem will probably correct itself after a few more printed pages. Otherwise, clean the printer. (See “Cleaning the print path” on page 46.)
	The printer driver is not set for the correct media.	1. Select **Optimize for:** in the **Paper** tab of the printer driver. Select the correct media. (This affects the current print job only.) 2. Select the correct media through the device configuration utility.
Characters are misformed and are producing hollow images. 	The media is too slick.	Try a different media. Make sure that the media meets specifications detailed in the *Print Media Guide* for the HP LaserJet printer family.
	The printer driver is not set for the correct media.	1. Select **Optimize for:** in the **Paper** tab of the printer driver. Select the correct media. (This affects the current print job only.) 2. Select the correct media through the device configuration utility.
Pages are skewed. 	The media is loaded incorrectly.	Reload the media, and make sure that the media guides are not too tight or too loose against the media stack.
	The input tray is too full.	Remove some of the sheets. The main input tray can hold up to 250 sheets of 20-lb (75 g/m^2) bond weight paper (less for heavier paper) or from 20 to 30 envelopes. The priority input tray can hold up to ten sheets of 20-lb (75 g/m^2) bond weight paper (one sheet of heavier paper) or one envelope.
	The type and quality of media you are using does not meet HP’s specifications.	Make sure that the media meets specifications detailed in the *Print Media Guide* for the HP LaserJet printer family.

Table 18. Solving print image-quality problems (continued)

Problem	Cause	Solution
The printed page has curls or waves. 	The environment is too warm or too humid.	1. Both high temperatures and high humidity levels cause media to curl. Move the printer to a different environment. 2. Use a different media. Make sure that the media meets specifications detailed in the *Print Media Guide* for the HP LaserJet printer family.
	The media was in the input tray too long.	Turn the stack of media over and put it back in the tray. Rotate the media 180° and put it back in the tray.
	The standard paper path is not working correctly.	Open the straight-through output door on the back of the printer and use this paper path.
	The fuser temperature is too high.	Select **Optimize for:** in the **Paper** tab of the printer driver. Make sure that it is set for the appropriate media.
Large amounts of toner are scattered around the characters. 	The media is resisting the toner.	1. Use a different media. Make sure that the media meets specifications detailed in the *Print Media Guide* for the HP LaserJet printer family. 2. Turn the stack of media over and put it back in the tray. 3. Use media that is designed for laser printers.

Solving paper-feed problems

Use the following table to solve problems related to moving paper or documents through the printer.

Table 19. Solving paper-feed problems

Problem	Cause	Solution
Pages are coming out curled or wrinkled.	Paper curl is inherent to the laser printing processes, and occurs when paper is subjected to heat. Paper curl tends to relax as the paper cools while resting on a flat surface.	Make sure that the media meets specifications detailed in the *Print Media Guide* for the HP LaserJet printer family.
	Paper is curled or wrinkled when using the paper output bin.	Open the straight-through output door on the back of the printer and use this paper path. Reset the fuser mode to the default.
	Paper is not stored properly.	Whenever possible, store paper in its sealed ream at room temperature.
	The media is too long for the printer output bin.	Use the long media extension.
	The fuser temperature is too high.	Select **Optimize for:** in the **Paper** tab of the printer driver. Make sure that it is set for the appropriate media.
Print is misaligned on the page (skewed pages).	The main input tray is overfilled.	Remove some of the media.
	The paper guides are not set correctly, are broken, or are missing.	Be sure to center the paper with the side media guides. Verify that the guides are not adjusted too tightly or too loosely against the paper. Check for broken or missing guides and replace as necessary.
	The paper's weight or surface finish does not meet HP's specifications.	Make sure that the media meets specifications detailed in the *Print Media Guide* for the HP LaserJet printer family.

Table 19. Solving paper-feed problems (continued)

Problem	Cause	Solution
The printer feeds multiple sheets or jams frequently from the main input tray or priority input tray.	The paper guides are not adjusted properly.	Slide the guides against the sides of the stack in the main input tray or the priority input tray to center the paper. Make sure the guides are not adjusted too tightly.
	The paper was not removed from the main input tray before refilling the tray.	Always remove paper from the main input tray before refilling it.
	The main input tray is overfilled.	Remove some of the sheets. The main input tray can hold up to 250 sheets of 20-lb (75 g75 g/m^2) bond weight paper (less for heavier paper) or from 20 to 30 envelopes.
	The priority input tray is overfilled.	Remove some of the sheets. The priority input tray can hold up to ten sheets of 20-lb (75 g/m^2) bond weight paper (one sheet of heavier paper) or one envelope.
	The paper was poorly cut by the manufacturer and is sticking together.	“Break” the ream of paper by curving it into an upside-down u-shape; this can effectively decrease multifeeds. Also try turning the paper around to feed the opposite end first, or use a different type of paper.
	The paper does not meet HP’s specifications for print media.	Make sure that the media meets specifications detailed in the *Print Media Guide* for the HP LaserJet printer family.
	The output capacity was exceeded in the paper output bin.	Do not allow more than 125 sheets of 20-lb (75 g/m^2) bond weight paper (less for heavier paper) to fill the paper output bin.
	The pickup roller is dirty.	Clean the pickup roller. (See “Cleaning the printer pickup roller” on page 49.)
	The pickup roller is damaged.	Replace the pickup roller. (See “Replacing the printer pickup roller” on page 39.)
	The separation pad is dirty.	Clean the separation pad. (See “Cleaning the printer separation pad” on page 50.)
	The separation pad is damaged.	Replace the separation pad. (See “Replacing the printer separation pad” on page 42.)
	A sensor is not operating properly.	Check the sensors to make sure that none of them are jammed. If a sensor cannot be “unjammed,” replace the sensor.

Engine test

The engine test is used to verify that the print engine is functioning correctly. The formatter is bypassed during an engine test, so the engine test is useful for isolating printer problems. The engine test prints horizontal lines down the entire printable area of a page and is also useful for checking and adjusting registration.

Printing an engine test

The engine test switch is inside the left cover, below the formatter.

To print an engine test, remove the left side cover. See “Left side cover” on page 81 and depress the engine test switch. A single test page will print.

Note

The formatter must be connected to the ECU to perform an engine test. (See callout 1 in figure 69 on page 128.) Otherwise, the printer does not print.

When you remove the left side cover, you must override the door interlock (SW 301). (See “Paper path check” on page 162.)

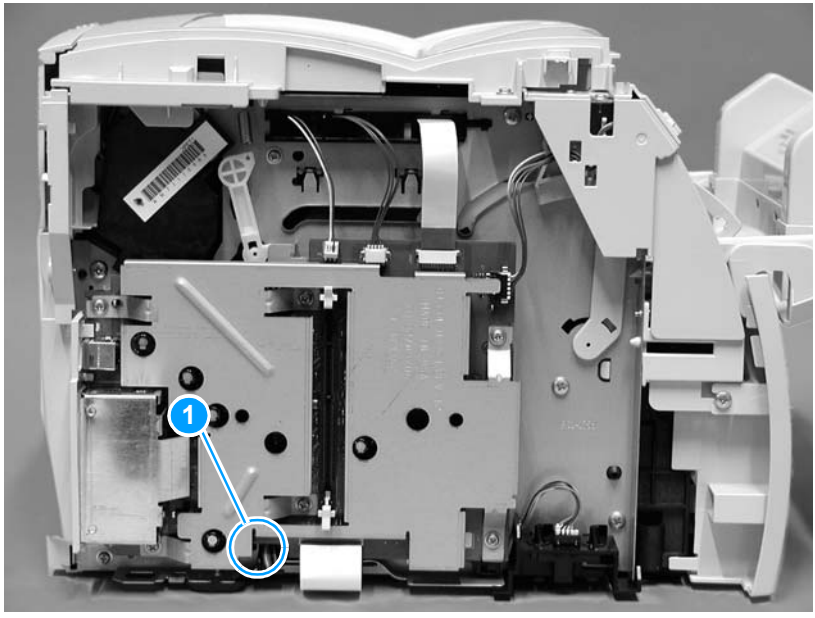


Figure 81. **Engine test switch**

Half self-test functional check

The electrophotographic process can be subdivided into the following stages:

- image formation stage (charges the drum and writes a latent image to the drum with the laser)
- development stage (forms a toner image on the drum)
- transfer stage (transfers the image to paper)
- cleaning stage (removes excess toner from the drum)
- fusing stage (applies heat and pressure to make the image on paper permanent)

To perform a half self-test check

The purpose of the half self-test check is to determine which process is malfunctioning.

1. Print a configuration page. (See “To print a self-test page” on page 167.)
2. Open the printer door after the paper advances half-way through the printer (about five seconds after the motor begins rotation). The leading edge of the paper should have advanced past the print cartridge.
3. Remove the print cartridge.
4. Open the print cartridge drum shield to view the drum surface. If a dark and distinct toner image is present on the drum surface, assume that the first two functions of the electrophotographic process are functioning (image formation and development). Troubleshoot the failure as a transfer or fusing problem.

To perform other checks

If there is no image on the photosensitive drum, perform these checks:

1. Make sure you removed the entire length of the sealing tape from the print cartridge before you installed the cartridge.
2. Perform a drum rotation functional check. (See “Drum rotation functional check” on page 158.)
3. Perform a high-voltage power supply check. (See “High-voltage power supply check” on page 160.)

Drum rotation functional check

The photosensitive drum, located in the print cartridge, must rotate for the print process to work. The photosensitive drum receives its drive from the main drive assembly.

Note This test is especially important if refilled print cartridges have been used.

1. Open the printer door.
2. Remove the print cartridge.
3. Mark the drive gear on the cartridge with a felt-tipped marker. Note the position of the mark.
4. Install the print cartridge and close the printer door. The start-up sequence should rotate the drum enough to move the mark.
5. Open the printer and inspect the gear that was marked in step 3. Verify that the mark moved.

If the mark did not move, inspect the main drive assembly to make sure that it is meshing with the print cartridge gears. If the drive gears appear functional and the drum does not move, replace the print cartridge.

Heating element check

Paper passes between the heating element and a soft pressure roller to fuse toner to the paper.

1. Unplug the printer for at least ten minutes.
2. Verify that the thermistor connector is seated into both the printer chassis and the ECU.
3. Remove the heating element connector (callout 1) from the ECU. To measure the continuity of the heating element, measure the resistance between the two pins at the end of the cable.

Note Normal resistance is 25 ohms +/- 10 ohms for the 110V printer and 80 ohms +/- 20 ohms for the 220V printer.

If no resistance is measured, replace the fuser.

4. Remove the thermistor connector (callout 2), and measure the resistance between J206 pins one and two and between J206 pins three and four.

Note Normal resistance between both pairs of pins is 370K ohms +/- 50K ohms at 20° C (68° F).

5. If no resistance is measured, replace the fuser.

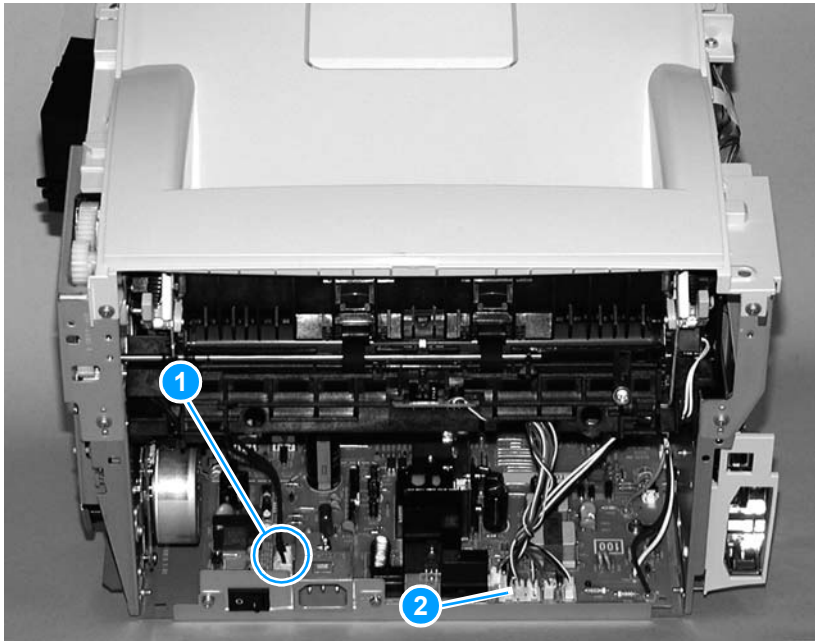


Figure 82. Locating connectors for the heating element check

High-voltage power supply check

The high-voltage power supply PCA provides the necessary voltages for the electrophotographic processes.

To check the print cartridge connection points

Turn the print cartridge over and visually inspect the three connection points on the ends of the print cartridge: drum ground (callout 1), charging (callout 2), and developing roller (callout 3). If they are dirty or corroded, clean the connection. If they are damaged, replace the print cartridge.

Note Use only isopropyl alcohol to clean the connections.

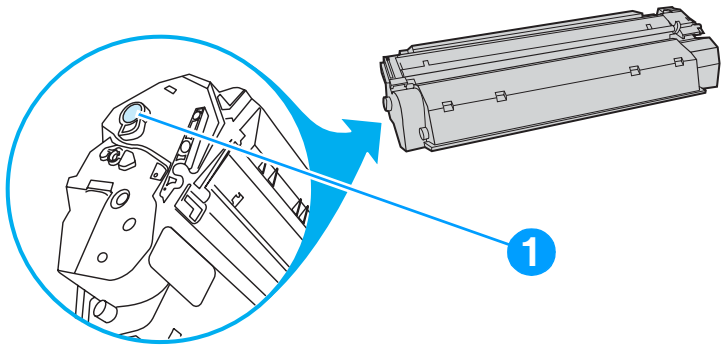


Figure 83. **Print cartridge high-voltage connection points (right side)**

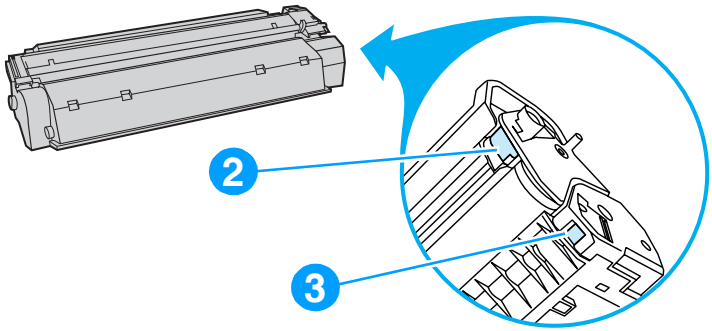


Figure 84. **Print cartridge high-voltage connection points (left side)**

To check the high-voltage connector assembly

The assembly uses three spring-loaded wire pins to contact the print cartridge: drum ground (callout 1), charging (callout 2), and developing roller (callout 3). Verify that the pins are not dirty or corroded and that the spring-loading action is functional. If the pins are dirty, clean them using isopropyl alcohol only. If they are damaged, replace the high voltage connector assembly.

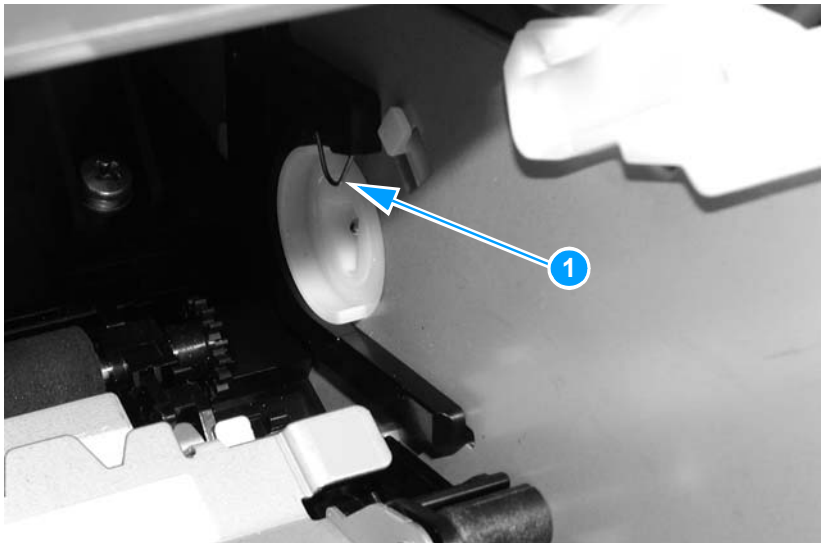


Figure 85. **High-voltage connector assembly (right side)**

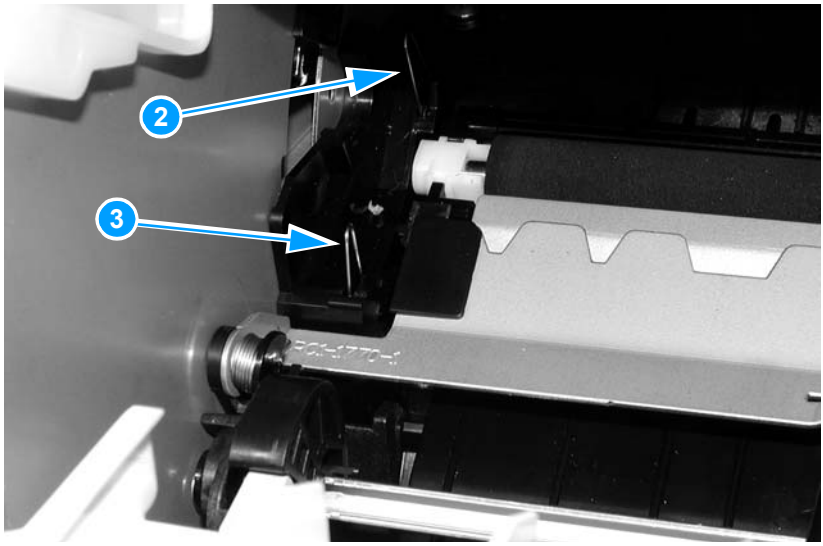


Figure 86. **High-voltage connector assembly (left side)**

Paper path check

If paper is not being picked up or is not moving through the paper path, you might want to observe all of the paper motion activities. Overriding the door interlock (SW301) allows you to observe:

- motor rotation
- solenoid action
- kick plate motion
- paper pickup roller motion
- drive roller, transfer roller, fuser roller and gear, and delivery roller motion

To override SW301

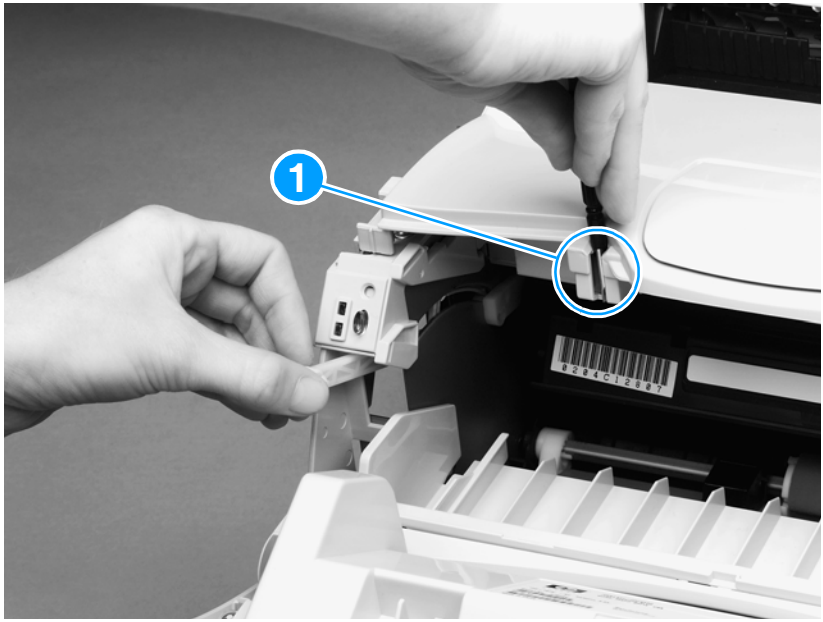


Figure 87. **Overriding SW301**

1. Remove the left side cover. (See “Left side cover” on page 81.)
2. Install the print cartridge, which will press SW301.
3. Press the laser/scanner interlock switch (callout 1) on the laser/scanner.
4. While SW301 and the laser/scanner interlock are engaged, perform an engine test or self-test to observe paper motion. (See procedures elsewhere in this chapter.)

NVRAM initialization

CAUTION Only perform the following procedure if absolutely necessary. Performing an NVRAM initialization resets some parameters that cannot be restored later.

NVRAM initialization sets all default variables stored in NVRAM back to factory default values or to a default ROM value, depending on the variable. It also performs a system reset.

NVRAM initialization resets the following:

- all menu settings to factory default values
- factory settings such as formatter number, page counts, and factory paper settings

To perform NVRAM initialization

1. Turn the printer off.
2. Press and hold down the Go button.
3. Turn the printer on, and continue to hold the Go button for at least 20 seconds. During this process, the Go button, Attention, and Ready LEDs will each turn on.
4. Release the Go button.
5. The printer LEDs will begin cycling. The NVRAM-unit process will run until the printer is in the ready state.

Cold reset

A cold reset changes most system parameters in NVRAM to the factory defaults. However, unlike NVRAM inititialization, a cold reset does not reset the page count, the paper tray sizes, language, or formatter number.

Note If an HP Jetdirect card is installed, remove it before performing a cold reset. Otherwise, the procedure will also reset all the HP Jetdirect settings as well as the printer settings.

To perform a cold reset

1. Turn the printer off.
2. Press and hold down the Go button.
3. Turn the printer on, and continue to hold the Go button for at least 5 seconds, but not longer than 15 seconds. During this process, the Attention LED will turn on.
4. Release the Go button.

Note If both the Attention and the Ready LEDs turn on before you release the Go button, you must start the procedure again with step 1.

5. The printer's LEDs will begin cycling. The cold-reset process will run until completion, and the printer will return to the ready state.

PJL software commands

Use PJL software commands to set the following NVRAM variables:

- Factory printer DEFAULT LPARM:PCL SYMSET
- Factory DEFAULT OEM bit
- Factory DEFAULT PRINTPAGECOUNT

The table below provides a more detailed description of the NVRAM PJL factory variables and commands and shows possible settings for each.

Table 20. NVRAM PJL factory variables

NVRAM PJL variable or command	Possible settings
DEFAULT PAPER	LETTER, LEGAL, A4, EXECUTIVE, COM10, MONARCH, DL, C5, B5, CUSTOM, JISB5, ISOB5, JPOST, JPOSTTD, A5, FOOLSCAP
DEFAULT LPARM: PCL SYMSET	ROMAN8, ISOLI, ISOL2, ISOL5, PC8, PCS8DN, PC850, PC852, PC8TK, WINL1, WINL2, WINL5, DESKTOP, PSTEXT, WNINTL, VNUS, MSPUBL, MATH8, PSMATH, WNMATH, PIFONT, LEGAL, ISO4, ISO6, ISO11, ISO15, ISO17, ISO21, ISO60, ISO69, WIN30
DEFAULT OEM	ON,OFF
DEFAULT PRINTPAGECOUNT	0-2147483647
CLEARNVRAM	None - Command
NVRAMINIT	None - Command

NVRAM PJL factory variables

To use these commands, you need some method to send PJL commands to the printer, either with a software tool or by copying a binary file that contains the commands from the host using a DOS box. For example, from the DOS prompt:

```
copy /b filename lpt1
```

Here is an example of a file that uses one of the commands:

```
ESC%-12345X@PJL SET SERVICEMODE=HPBOISEID
@PJL 'command'
@PJL RESET
```

Here is an example of using the NVRAMINIT command:

```
ESC%-12345X@PJL SET SERVICEMODE=HPBOISEID
@PJL NVRAMINIT
@PJL RESET
```

Note Set SERVICEMODE before trying to set the variable or you will not get the desired result. Also reset the PJL and print a report to verify that the SERVICEMODE status is cleared.

To create these files, you need an editor that can insert the ESC character or is able to copy it in from a existing file. If a software tool is used, simply send the same strings in the same order as given for the example files.

Troubleshooting tools

Internal reports

Use the control panel to print self-test pages, which show the print settings.

To print a self-test page

1 When the printer is in the ready state, press and hold the Go button for five seconds. When the Go light illuminates, release the Go button.

2 A self-test (configuration) page will print.

Information found on the self-test page

The self-test page has the following fields: Product Information, Installed Personalities and Options, Print Settings, Paper Options, and Page Counts (including pages jammed in printer, pages mispicked in printer, and total pages printed). The HP LaserJet 1150 printer's self-test page also has a section that provides printer status information.

The HP LaserJet 1300 series printer prints a second page that provides supplies status information such as the amount of toner remaining in the cartridge and the number of pages printed with the current cartridge.

If an optional paper feeder is installed (HP LaserJet 1300 series printer only), an additional page prints that has information about the paper feeder.

If an HP Jetdirect ethernet card is installed (HP LaserJet 1300 series printer only), a separate page prints that contains information about network settings.

To view a sample self-test page for the HP LaserJet 1300 series printer, see figure 88 on page 169.

To print a continuous self-test page

1 Turn the printer off.

2 Press and hold the Go button.

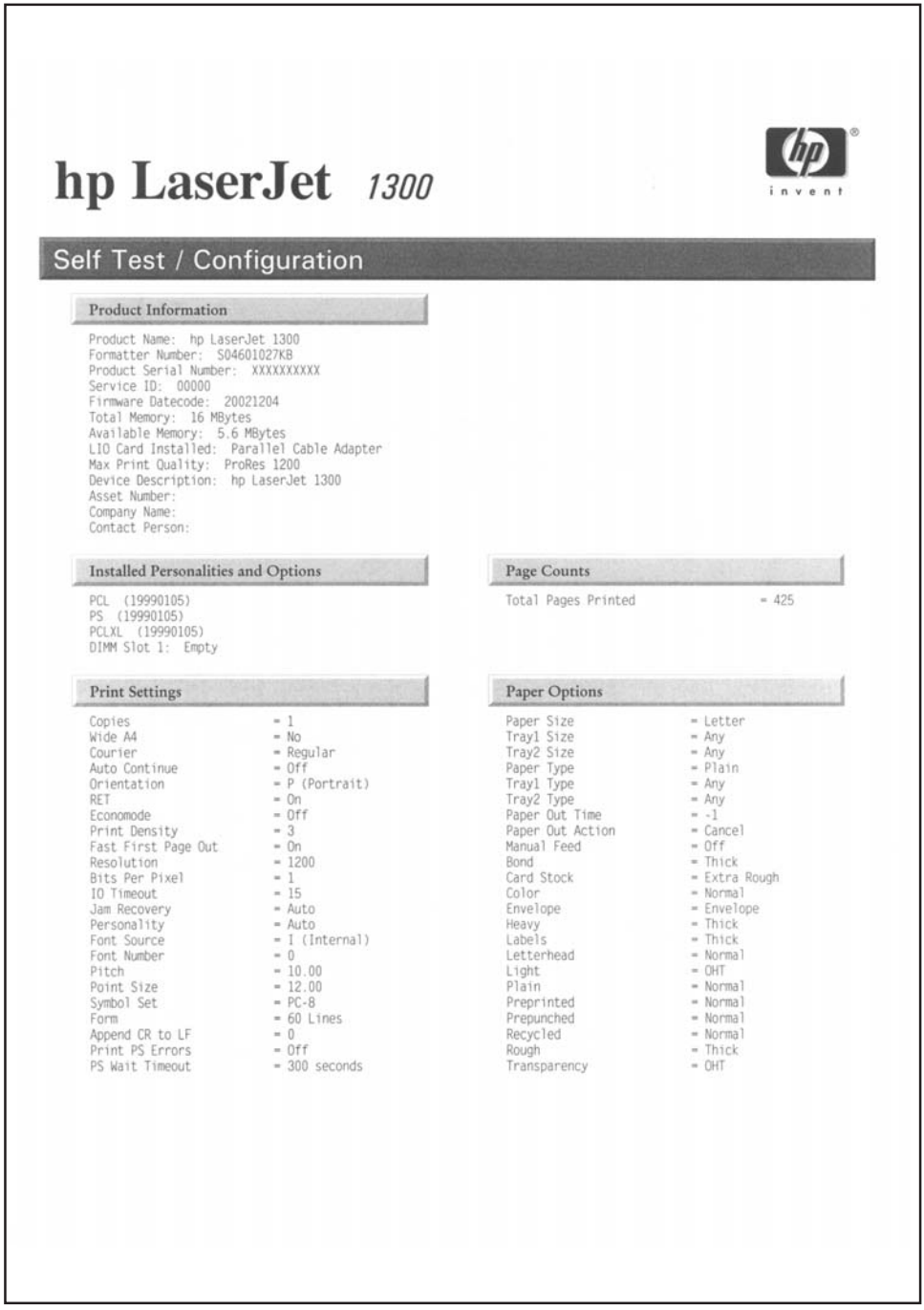
3 Turn the printer on and continue to hold the Go button for approximately 15 seconds. Do not hold the Go button for more than 20 seconds, or you might initialize NVRAM.

Note During this process the Attention LED will turn on. If the Ready LED also turns on before you release the Go button, you must start again with step 1.

4 Release the Go button, and the printer LEDs will begin cycling and will run until the printer is in the ready state.

To stop a continuous self-test page

Press the Go button.



hp LaserJet 1300

invent

Self Test / Configuration

Product Information

Product Name: hp LaserJet 1300
Formatter Number: S04601027KB
Product Serial Number: XXXXXXXXXX
Service ID: 00000
Firmware Datecode: 20021204
Total Memory: 16 MBytes
Available Memory: 5.6 MBytes
LIO Card Installed: Parallel Cable Adapter
Max Print Quality: ProRes 1200
Device Description: hp LaserJet 1300
Asset Number:
Company Name:
Contact Person:

Installed Personalities and Options

PCL (19990105)
PS (19990105)
PCLXL (19990105)
DIMM Slot 1: Empty

Page Counts

Total Pages Printed	= 425

Print Settings

Copies	= 1
Wide A4	= No
Courier	= Regular
Auto Continue	= Off
Orientation	= P (Portrait)
RET	= On
Economode	= Off
Print Density	= 3
Fast First Page Out	= On
Resolution	= 1200
Bits Per Pixel	= 1
IO Timeout	= 15
Jam Recovery	= Auto
Personality	= Auto
Font Source	= I (Internal)
Font Number	= 0
Pitch	= 10.00
Point Size	= 12.00
Symbol Set	= PC-8
Form	= 60 Lines
Append CR to LF	= 0
Print PS Errors	= Off
PS Wait Timeout	= 300 seconds

Paper Options

Paper Size	= Letter
Tray1 Size	= Any
Tray2 Size	= Any
Paper Type	= Plain
Tray1 Type	= Any
Tray2 Type	= Any
Paper Out Time	= -1
Paper Out Action	= Cancel
Manual Feed	= Off
Bond	= Thick
Card Stock	= Extra Rough
Color	= Normal
Envelope	= Envelope
Heavy	= Thick
Labels	= Thick
Letterhead	= Normal
Light	= OHT
Plain	= Normal
Preprinted	= Normal
Prepunched	= Normal
Recycled	= Normal
Rough	= Thick
Transparency	= OHT

Figure 88. Self-test page

Repetitive image defect ruler

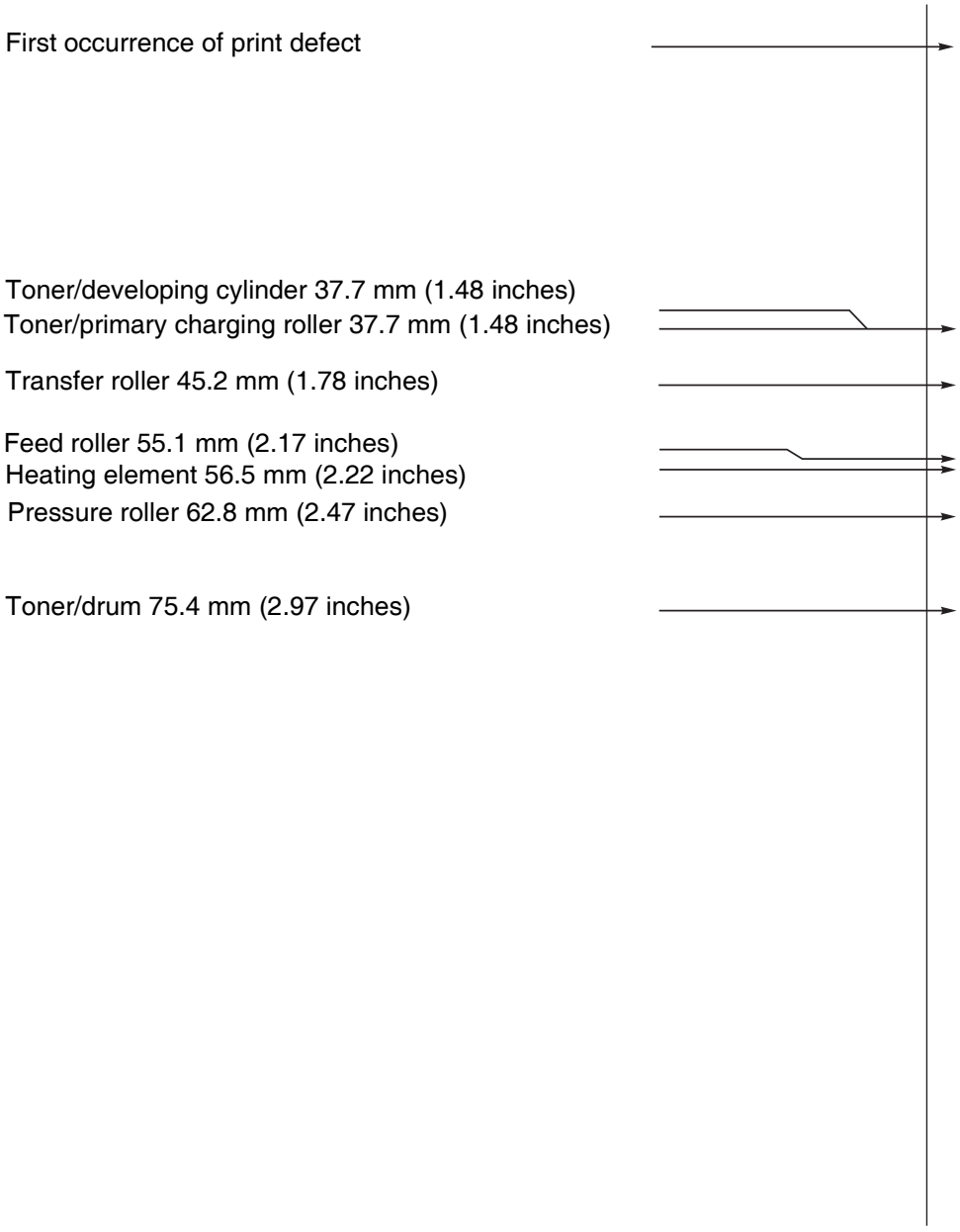

First occurrence of print defect
Toner/developing cylinder 37.7 mm (1.48 inches)
Toner/primary charging roller 37.7 mm (1.48 inches)
Transfer roller 45.2 mm (1.78 inches)
Feed roller 55.1 mm (2.17 inches)
Heating element 56.5 mm (2.22 inches)
Pressure roller 62.8 mm (2.47 inches)
Toner/drum 75.4 mm (2.97 inches)

Figure 89. **Repetitive image defect ruler**

Main wiring

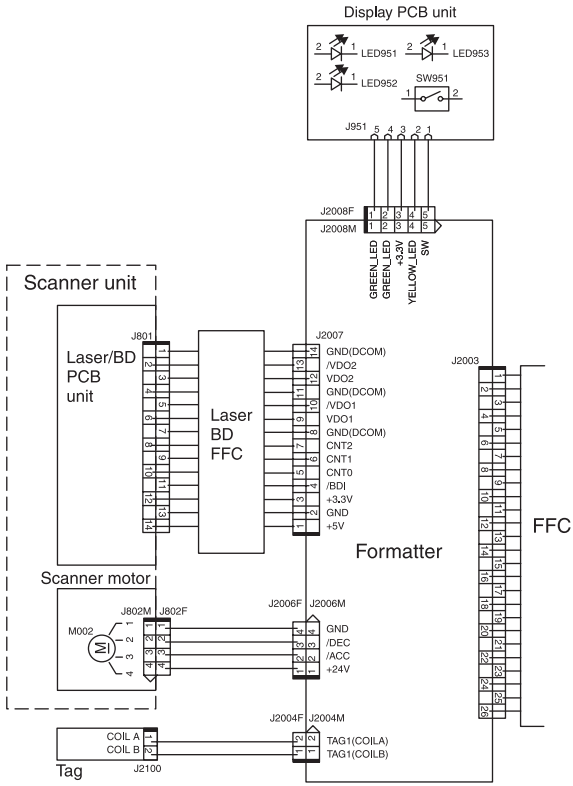


Figure 90. **Main wiring (1 of 2)**

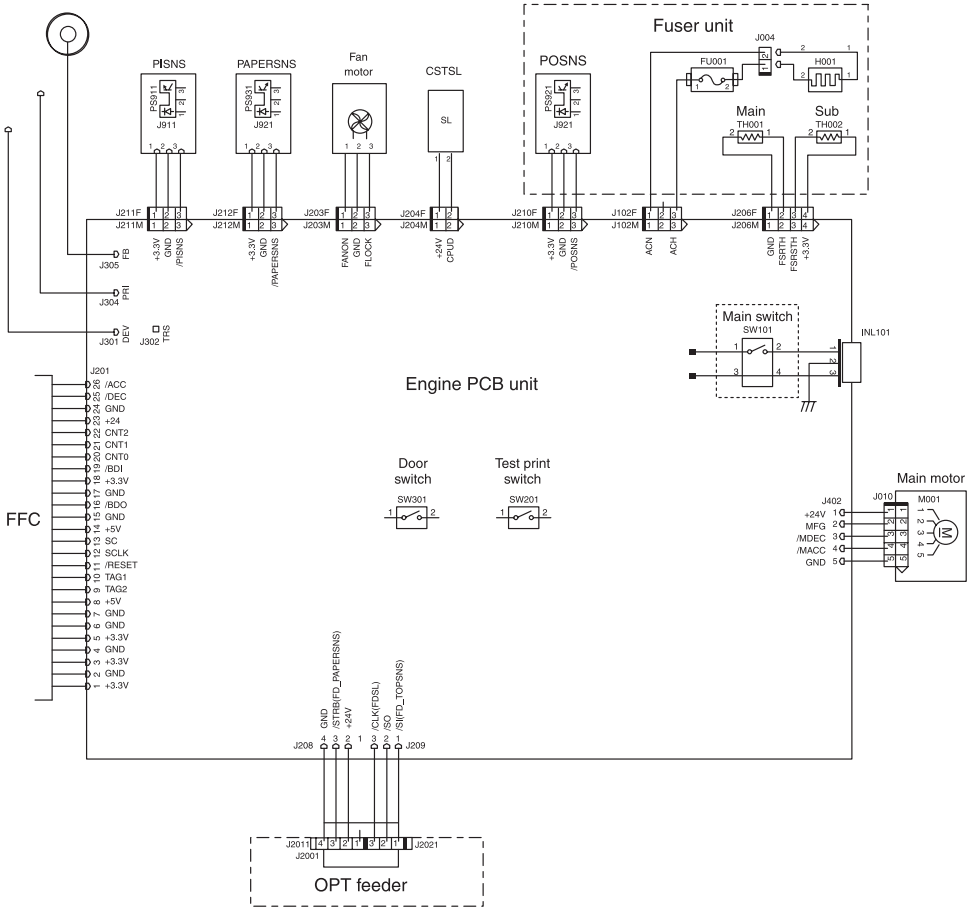


Figure 91. **Main wiring (2 of 2)**

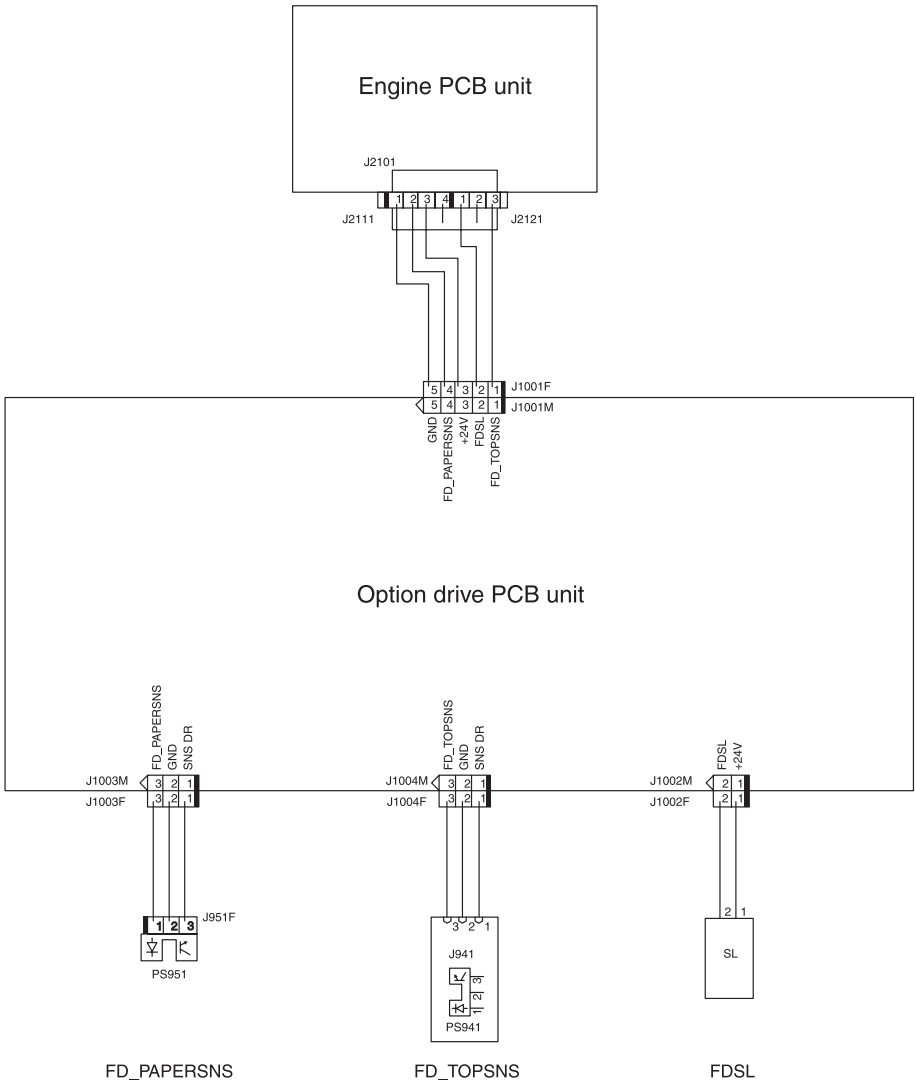


Figure 92. **Optional paper feeder wiring**

Note The paper feeder is an option only for the HP LaserJet 1300 series printer.

Locations of connectors

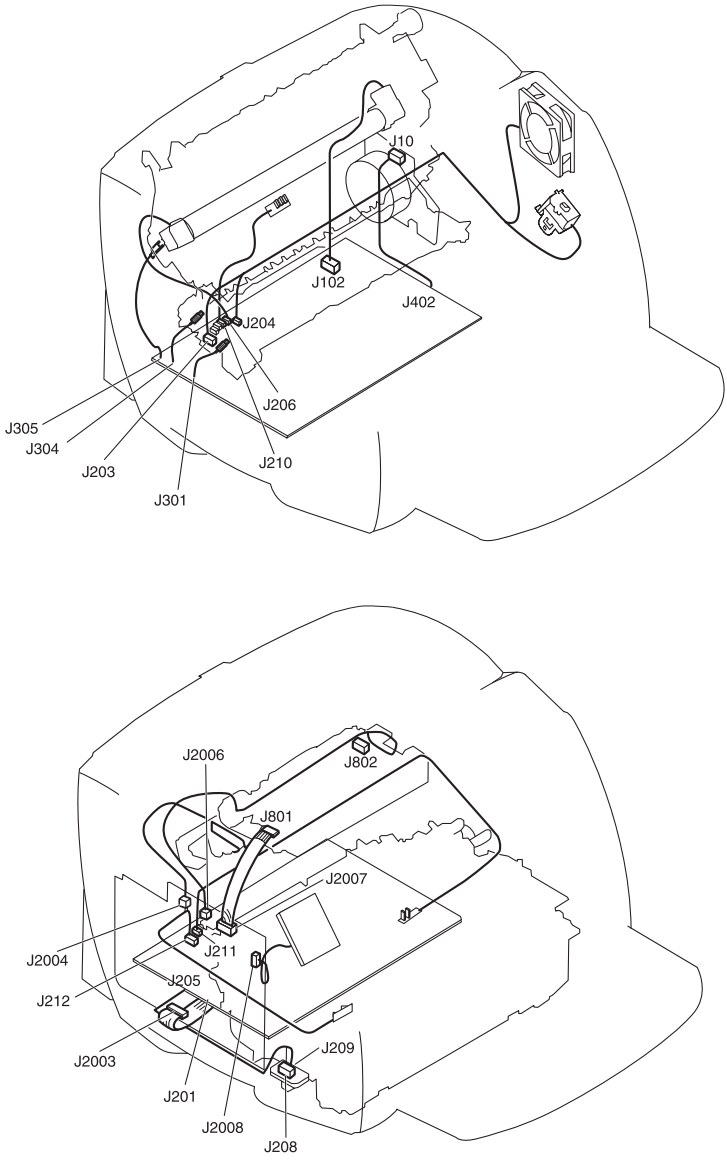


Figure 93. **Locations of printer connectors**

Locations of LEDs, jumpers, and switches

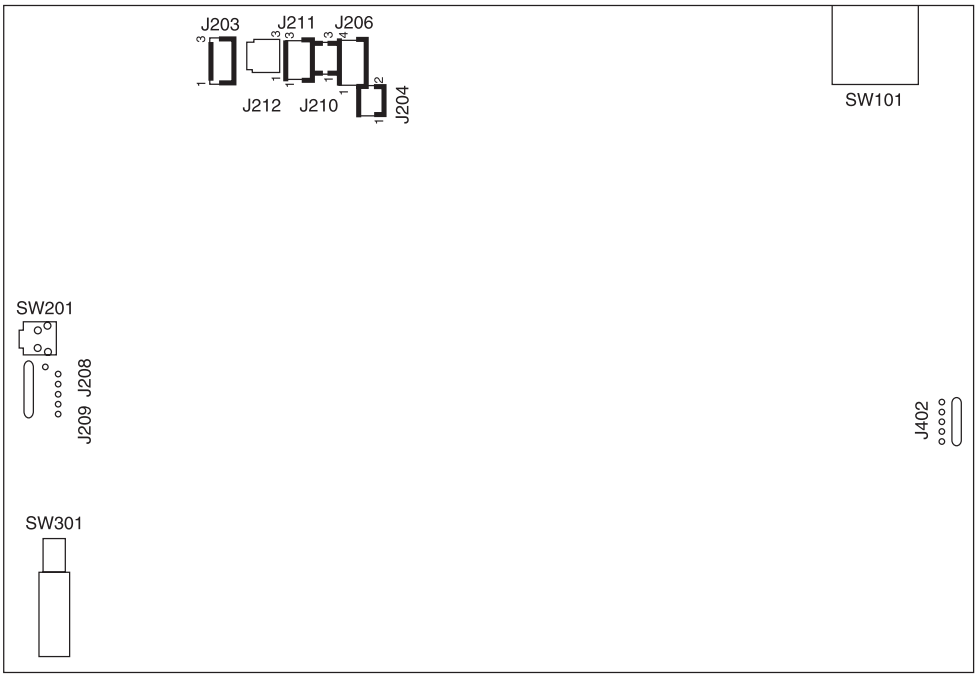


Figure 94. **Locations of LEDs, jumpers, and switches**

Table 21. Switch functions

SW number	Function
SW101	Power switch
SW201	Switch for test print
SW301	Switch for detection of open door

7 Parts and diagrams

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Ordering parts and supplies

Parts

Order replacement parts from the following website:
https://partsdirect.hp.com/epdo/default/mainmenu.asp

Related documentation and software

Some documentation and software is available at the following websites:

Table 22. Technical support websites

HP Customer Care Online Software drivers, support documentation, and answers to frequently asked questions	http://www.hp.com/go/support
HP Technical Training (North America) Classes and schedules	http://www.compaq.com/training
Parts Parts information	http://www.hp.com/go/partsinfo

Consumables

Printer consumables are listed in chapter 3, “Maintenance,” in table 11 on page 38. Consumables are available directly from Hewlett-Packard at the following numbers:

- US: (800) 538-8787
- Canada: (800) 387-3154
  in Toronto: (416) 671-8383
- United Kingdom: 0734-441212
- Germany: 0130-3322

Contact your local HP Parts Coordinator for other local phone numbers.

Accessories

Table 23. Accessories

Item	Description	Part number
Dual in-line memory modules (DIMMs)	8 MB	C7842A
	16 MB	C7843A
	32 MB	C7845A
	64 MB	C7846A
Print cartridge	HP LaserJet 1300 series 2,500 page cartridge	Q2613A
	HP LaserJet 1300 series 3,500 page cartridge	Q2613X
	HP LaserJet 1150 printer 2,500 page cartridge	Q2624A
Cables and interface accessories	2-meter IEEE-1284 parallel cable	C2950A
	3-meter IEEE-1284 parallel cable	C2951A
	2-meter USB cable	8121-0539
	2-foot USB cable	8121-0549
	Power cord, US/Canada	8120-6812
	Power cord, Europe	8120-6811
	Power cord, Switzerland	8120-6815
	Power cord, UK	8120-6809
	Power cord, Danish	8120-6814
	Power cord, SA	8120-6813
	Power cord, Israel	8120-6800

Table 23. Accessories (continued)

Item	Description	Part number
HP LaserJet 1150 printer 10/100 networking and wireless print servers	HP Jetdirect 175x fast-ethernet print server (value line, USB port)	J6035B
	HP Jetdirect 310x fast-ethernet external print server (full featured, USB port)	J6038A
	HP Jetdirect 380x 802.11b wireless external print server (full featured, USB port)	J6061A
	HP Jetdirect WP110 802.11b wireless print server (value line, parallel port)	J6062A
	Bluetooth wireless printer adaptor for parallel port printers	MPIPA330
HP LaserJet 1300 series 10/100 networking and wireless print servers	HP Jetdirect 200m fast-ethernet print server for LIO peripherals (value line)	J6039B
	HP Jetdirect 250m fast-ethernet LIO print server (full featured)	J6042B
	HP Jetdirect 280m 802.11b wireless LIO print server (full featured)	J6044A
	HP Jetdirect 175x fast-ethernet external print server (value line, USB port)	J6035B
	HP Jetdirect 310x fast-ethernet external print server (full featured, USB port)	J6038A
	HP Jetdirect 380x 802.11b wireless external print server (full featured, USB port)	J6061A
	HP Jetdirect WP110 802.11b wireless print server (value line, parallel port)	J6062A
	Bluetooth wireless printer adaptor for parallel port printers	MPIPA330

Table 23. Accessories (continued)

Item	Description	Part number
Power modules (NOTE: If two parts are listed for one country or region, you can use either part regardless of the output rating.)	Australia, New Zealand, and Argentina INPUT: 240 Vac 50 Hz OUTPUT: 13 VDC @ 300 ma	0950-3172
	Australia, New Zealand, and Argentina INPUT: 240 Vac 50 Hz OUTPUT: 13 VDC @ 800 ma	0950-3358
	China INPUT: 220 Vac 50 Hz OUTPUT: 13 VDC @ 300 ma	0950-2806
	China INPUT: 220 Vac 50 Hz OUTPUT: 13 VDC @ 800 ma	0950-3347
	Continental Europe INPUT: 230 Vac 50 Hz OUTPUT: 13 VDC @ 300 ma	0950-3170
	Continental Europe INPUT: 230 Vac 50 Hz OUTPUT: 13 VDC @ 800 ma	0950-3349
	Japan INPUT: 100 Vac 50 Hz OUTPUT: 13 VDC @ 300 ma	0950-3173
	Japan INPUT: 100 Vac 50 Hz OUTPUT: 13 VDC @ 800 ma	0950-3352
	South Korea INPUT: 220-240 Vac 50 Hz OUTPUT: 13 VDC @ 625 ma	9100-5168
	South Korea INPUT: 220 Vac 50 Hz OUTPUT: 13 VDC @800 ma	0950-3351
	South Africa and India INPUT: 220-250 Vac 50 Hz OUTPUT: 13 VDC @ 625 ma	9100-5171
	South Africa and India INPUT: 220-250 Vac 50 Hz OUTPUT: 13 VDC @ 800 ma	0950-3354
	United Kingdom, Singapore, Ireland, and Hong Kong SAR INPUT: 220-240 Vac 50 Hz OUTPUT: 13 VDC @ 300 ma	0950-3171

Table 23. Accessories (continued)

Item	Description	Part number
Power modules (continued)	United Kingdom, Singapore, Ireland, and Hong Kong SAR INPUT: 220-240 Vac 50 Hz OUTPUT: 13 VDC @ 800 ma	0950-3350
	USA, Canada, Latin America, and Taiwan INPUT: 110-127 Vac 60 Hz OUTPUT: 13 VDC @ 300 ma	0950-3169
	USA, Canada, Latin America, and Taiwan INPUT: 110-127 Vac 60 Hz OUTPUT: 13 VDC @ 800 ma	0950-3348
Toner cloth		5090-3379

How to use the parts lists and diagrams

The figures in this chapter illustrate the major subassemblies in the printer and their component parts. A table (material list) follows each exploded assembly diagram. Each table lists the reference designator, the associated part number for the item, and a description of the part.

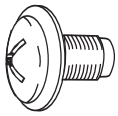
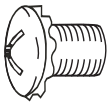
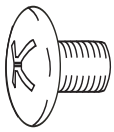
Parts that have no reference designator or part number are not field-replaceable units and cannot be ordered.

While looking for a part number, pay careful attention to the voltage listed in the description column to make sure that the part number selected is for the correct printer model.

Common hardware

The printer has three common fasteners. See table 24 for a description of these screw types.

Table 24. Common fasteners

Example	Description
	Screw, machine, truss head
	Screw, star
	Screw, self-tapping

Assembly locations

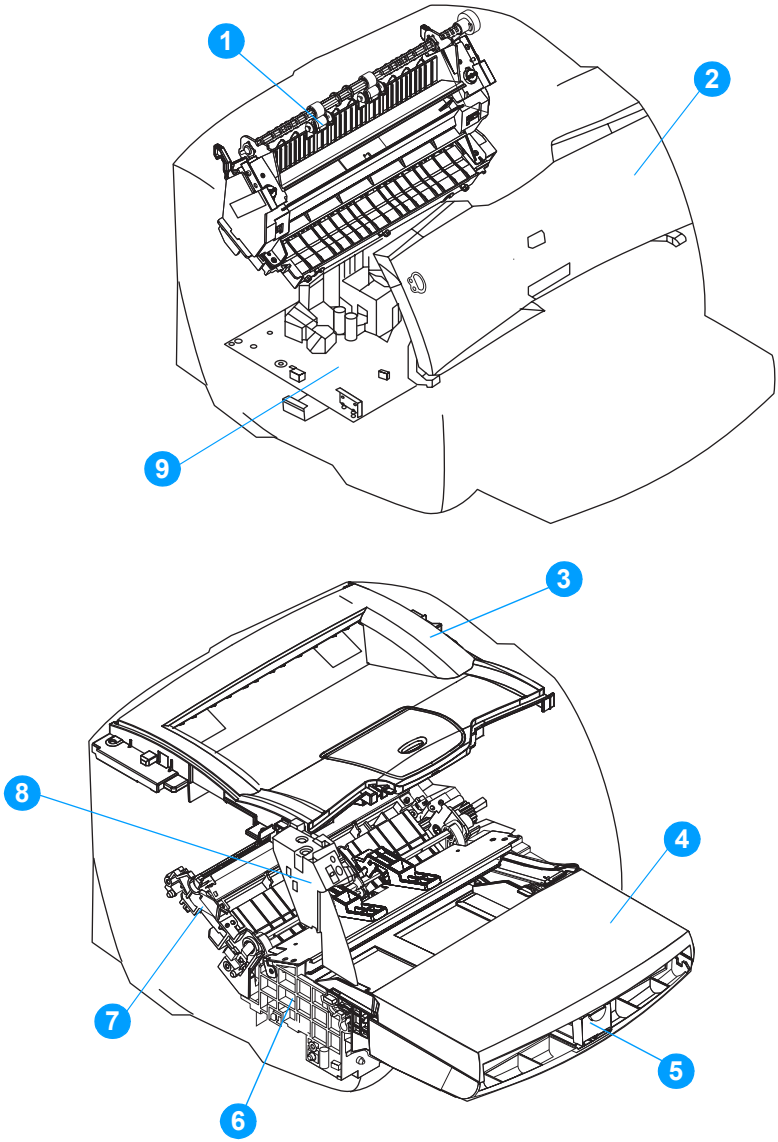


Figure 95. **Assembly locations**

Part numbers

Table 25. Printer assemblies

Ref.	Part number	Description	Qty.
1	RM1-0535-000CN	fuser, 110 volt	1
	RM1-0536-000CN	fuser, 220 volt	1
2	RM1-0543-000CN	print cartridge door assembly	1
3	RM1-0552-000CN	top cover assembly (HP LaserJet 1300)	1
	RM1-0720-000CN	top cover assembly (HP LaserJet 1150)	1
4	RM1-0554-000CN	input tray cover	1
5	RM1-0553-000CN	input tray	1
6	RM1-0531-000CN	paper pickup assembly	1
7	RM1-0530-000CN	paper feed guide assembly (HP LaserJet 1300)	1
	RM1-0721-000CN	paper feed guide assembly (HP LaserJet 1150)	1
8	RM1-0549-000CN	control panel assembly	1
9	RM1-0564-000CN	ECU, 110 volt (HP LaserJet 1300)	1
	RM1-0565-000CN	ECU, 220 volt (HP LaserJet 1300)	1
	RM1-0566-000CN	ECU, 110 volt (HP LaserJet 1150)	1
	RM1-0567-000CN	ECU, 220 volt (HP LaserJet 1150)	1

Covers

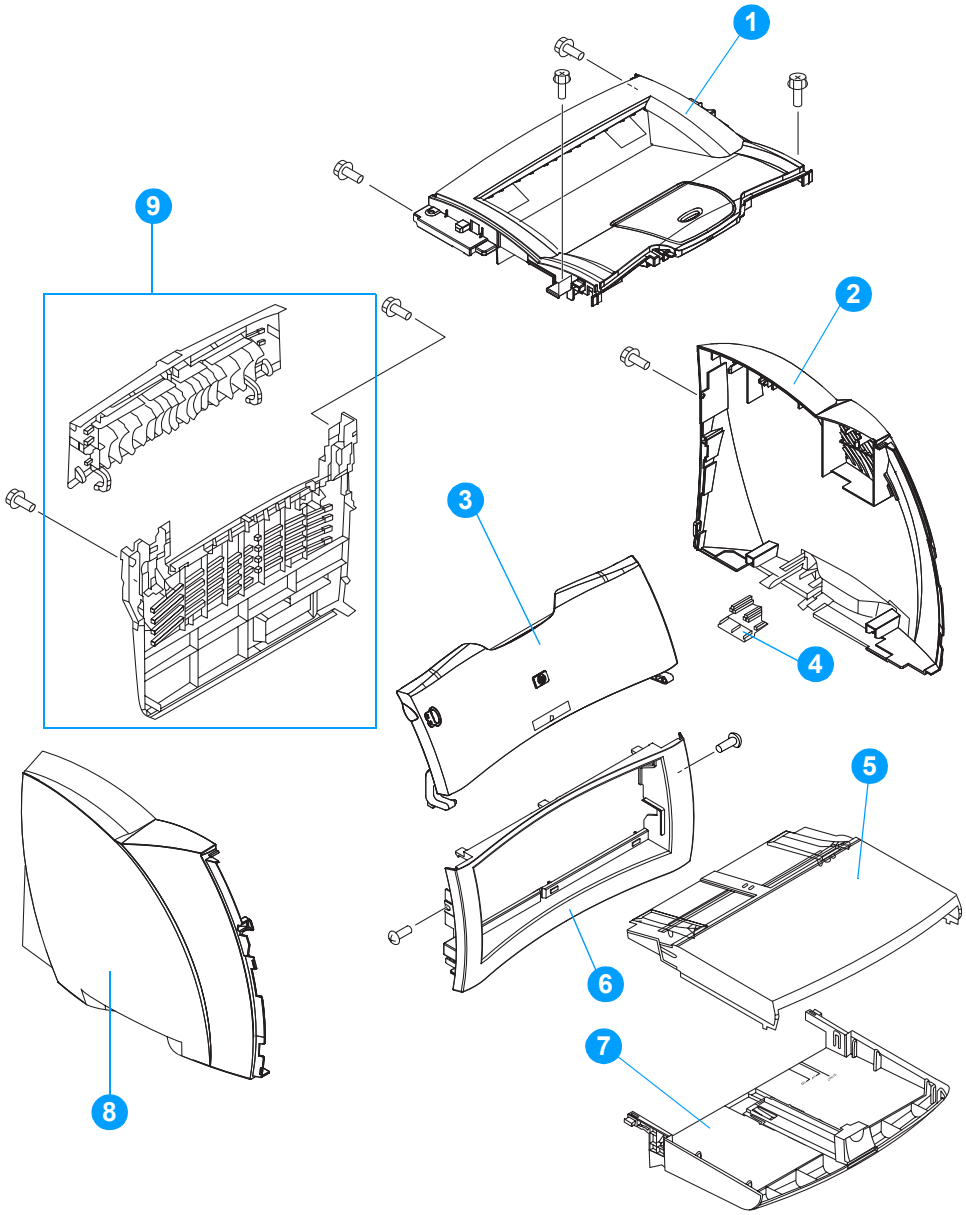


Figure 96. **Covers**

Part numbers

Table 26. Covers

Ref.	Part number	Description	Qty.
1	RM1-0552-000CN	top cover assembly (HP LaserJet 1300)	1
	RM1-0720-000CN	top cover assembly (HP LaserJet 1150)	1
2	RC1-1822-000CN	cover, right	1
3	RM1-0543-000CN	print cartridge door assembly	1
4	RC1-1852-000CN	cap, cover, right (HP LaserJet 1150)	1
5	RM1-0554-000CN	input tray cover	1
6	RC1-1821-000CN	cover, front	1
7	RM1-0553-000CN	input tray	1
8	RC1-1823-000CN	cover, left	1
9	RM1-0544-000CN	cover, rear assembly	1
	RY7-5082-000CN	Screw kit (contains a full set of screws for the printer)	1

Internal assemblies

Internal components (1 of 2)

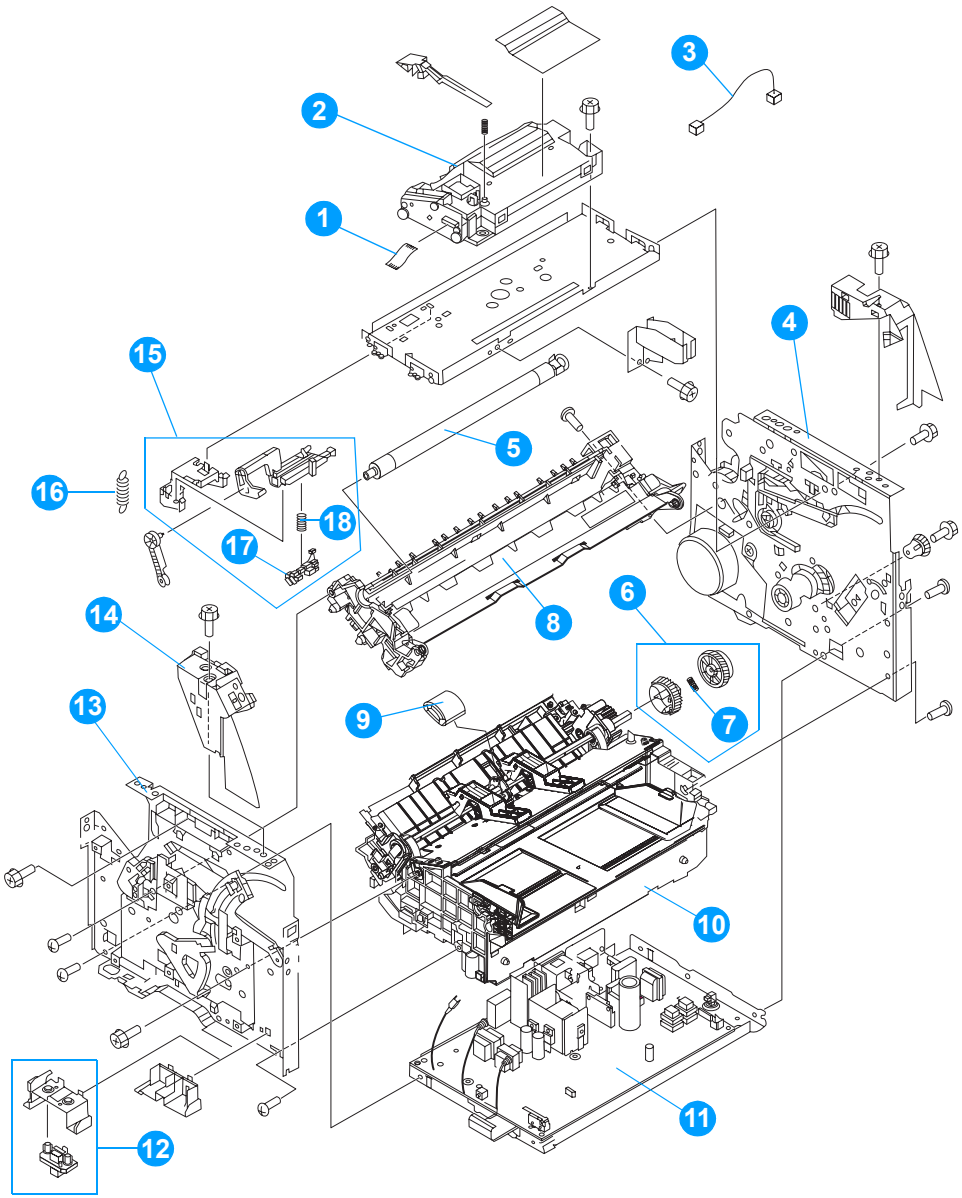


Figure 97. **Internal components (1 of 2)**

Part numbers

Table 27. Internal components (1 of 2)

Ref.	Part number	Description	Qty.
1	RK2-0029-000CN	cable, flat	1
2	RM1-0524-000CN	laser/scanner assembly	1
3	RM1-0563-000CN	cable, scanner motor	1
4	RM1-0527-000CN	right side plate assembly (HP LaserJet 1300)	1
	RM1-0678-000CN	right side plate assembly (HP LaserJet 1150)	1
5	RM1-0545-000CN	transfer roller assembly	1
6	RM1-0551-000CN	paper pickup gear assembly	1
7	RU5-2142-000CN	spring, compression	1
8	RM1-0530-000CN	paper feed guide assembly (HP LaserJet 1300)	1
	RM1-0721-000CN	paper feed guide assembly (HP LaserJet 1150)	1
9	RL1-0303-000CN	roller, paper pickup	1
10	RM1-0531-000CN	paper pickup assembly	1
11	RM1-0564-000CN	ECU, 110 volt (HP LaserJet 1300)	1
	RM1-0565-000CN	ECU, 220 volt (HP LaserJet 1300)	1
	RM1-0566-000CN	ECU, 110 volt (HP LaserJet 1150)	1
	RM1-0567-000CN	ECU, 220 volt (HP LaserJet 1150)	1
12	RM1-0529-000CN	optional paper feeder connector assembly (HP LaserJet 1300)	1
13	RM1-0528-000CN	left side plate assembly	1
14	RM1-0549-000CN	control panel assembly	1
15	RM1-0542-000CN	e-label contact assembly (HP LaserJet 1300)	1
16	RU5-2143-000CN	spring, tension (HP LaserJet 1300)	1
17	RM1-0571-000CN	cable, e-label (HP LaserJet 1300)	1
18	RU5-2141-000CN	spring, compression (HP LaserJet 1300)	1

Internal components (2 of 2)

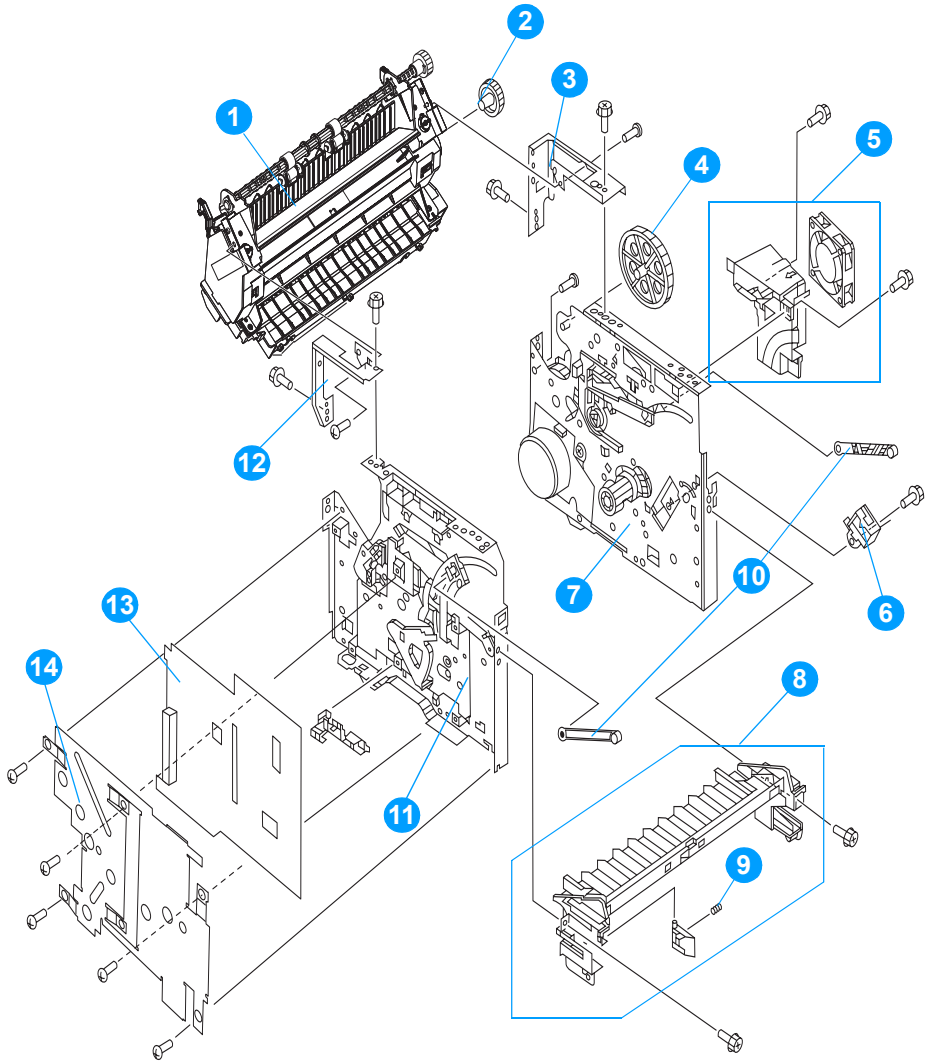


Figure 98. **Internal components (2 of 2)**

Part numbers

Table 28. Internal components (2 of 2)

Ref.	Part number	Description	Qty.
1	RM1-0535-000CN	fuser, 110 volt	1
	RM1-0536-000CN	fuser, 220 volt	1
2	RA0-1088-000CN	gear, 29T	1
3	RA0-1186-000CN	plate, right rear	1
4	RA0-1176-000CN	gear, 69T	1
5	RM1-0547-000CN	fan assembly	1
6	RH7-5314-000CN	solenoid	1
7	RM1-0527-000CN	right side plate assembly (HP LaserJet 1300)	1
	RM1-0678-000CN	right side plate assembly (HP LaserJet 1150)	1
8	RM1-0546-000CN	front guide assembly (HP LaserJet 1300)	1
	RM1-0682-000CN	front guide assembly (HP LaserJet 1150)	1
9	RA0-1180-000CN	spring, compression	1
10	RA0-1023-000CN	link, connecting	2
11	RM1-0528-000CN	left side plate assembly	1
12	RA0-1185-000CN	plate, left rear	1
13	Q2455-67901	formatter- new (HP LaserJet 1150)	1
	Q2455-69001	formatter - exchange (HP LaserJet 1150)	1
	Q1890-67901	formatter - new (HP LaserJet 1300)	1
	Q1890-69001	formatter - exchange (HP LaserJet 1300)	1
14	Q1334-00001	ESD shield (HP LaserJet 1300)	1

Left side plate assembly

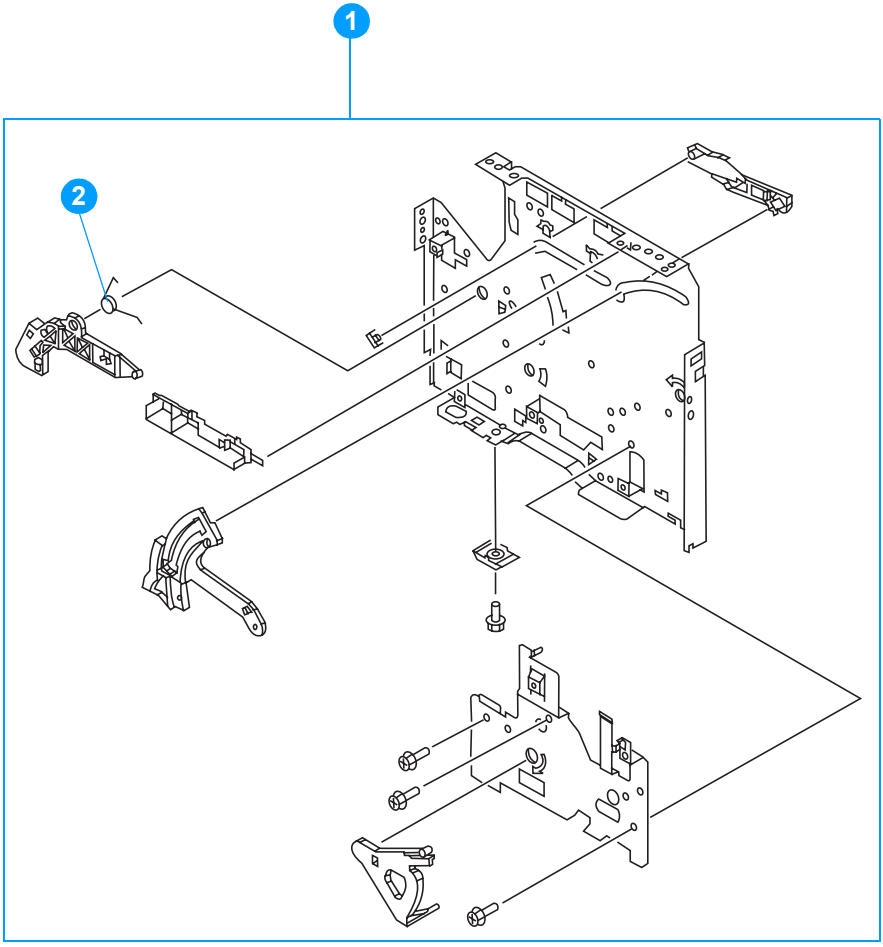


Figure 99. **Left side plate assembly**

Part numbers

Ref.	Part number	Description	Qty.
1	RM1-0528-000CN	left side plate assembly	1
2	RC1-1765-000CN	spring, torsion	1

Right side plate assembly

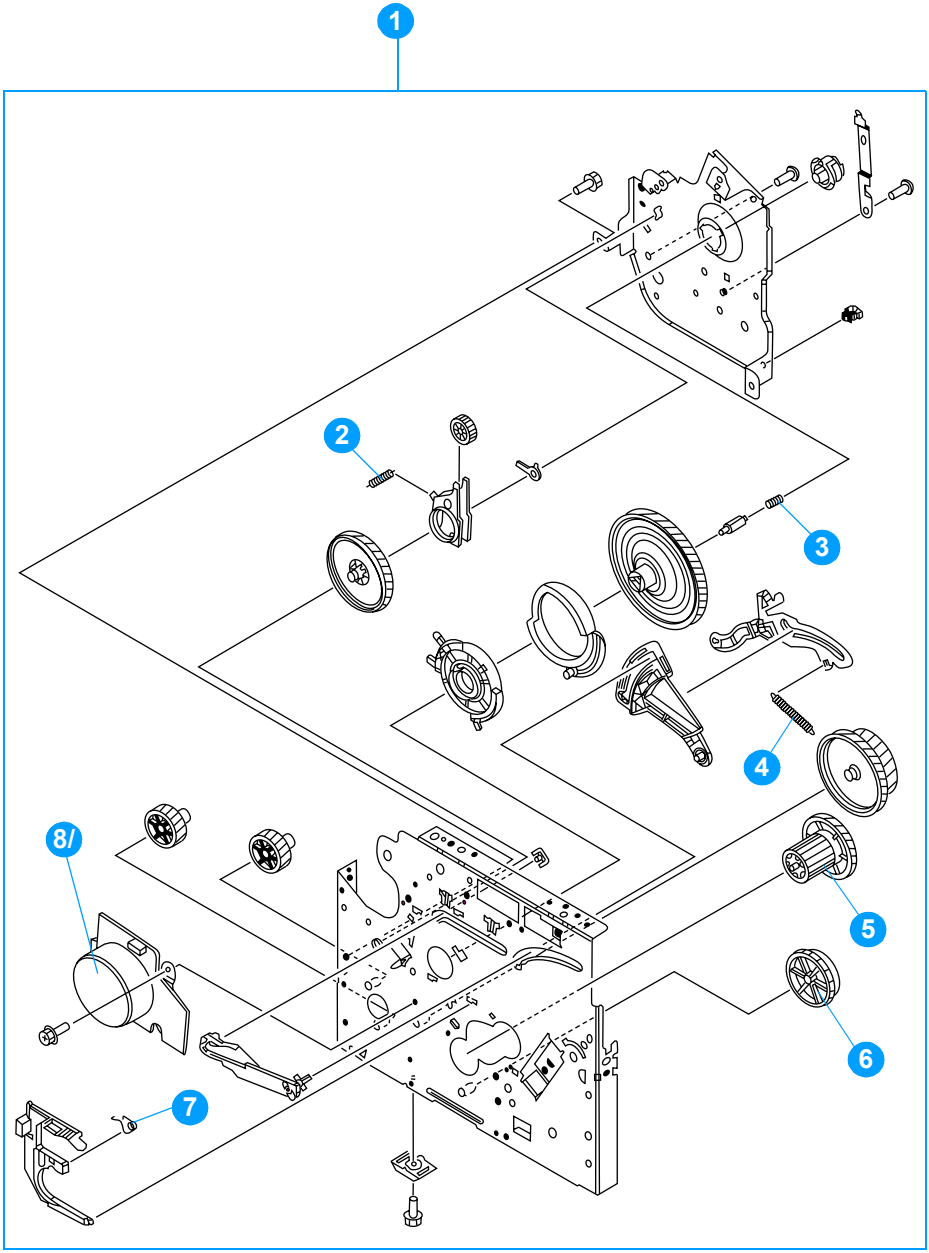


Figure 100. **Right side plate assembly**

Part numbers

Ref.	Part number	Description	Qty.
1	RM1-0527-000CN	right side plate assembly (HP LaserJet 1300)	1
	RM1-0678-000CN	right side plate assembly (HP LaserJet 1150)	1
2	RA0-1006-000CN	spring, tension	1
3	RA0-1012-000CN	spring, compression	1
4	RA0-1212-000CN	spring, tension	1
5	RA0-1016-000CN	gear, 87T/23T (HP LaserJet 1150)	1
	RC1-1752-000CN	gear, 87T/23T (HP LaserJet 1300)	1
6	RC1-1755-000CN	gear, 41T (HP LaserJet 1300)	1
7	RA0-1026-000CN	spring, torsion	1
8	RK2-0062-000CN	motor	1

Electrical components

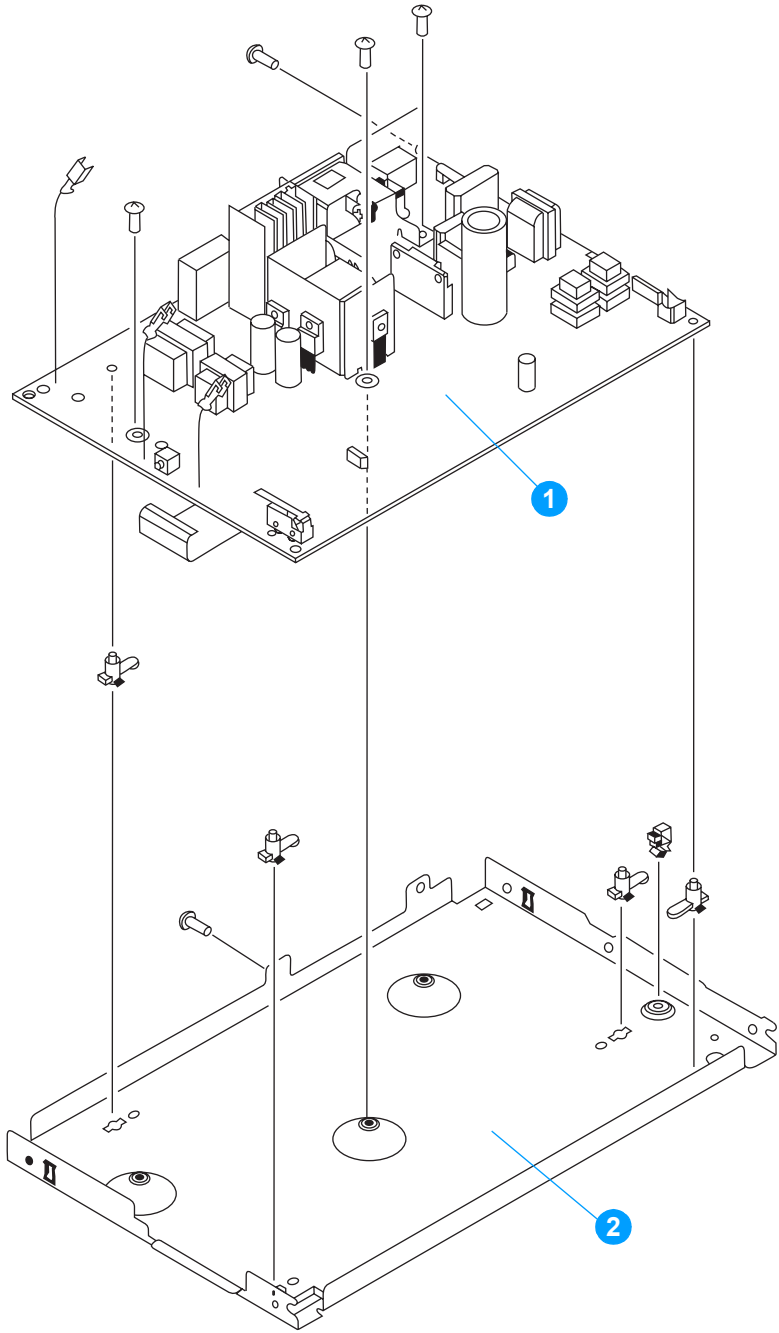


Figure 101. **Electrical components**

Part numbers

Table 29. Electrical components

Ref.	Part number	Description	Qty.
1	RM1-0564-000CN	ECU, 110 volt (HP LaserJet 1300)	1
	RM1-0565-000CN	ECU, 220 volt (HP LaserJet 1300)	1
	RM1-0566-000CN	ECU, 110 volt (HP LaserJet 1150)	1
	RM1-0567-000CN	ECU, 220 volt (HP LaserJet 1150)	1
2	RC1-1813-000CN	pan, ECU	1

Paper pickup assembly

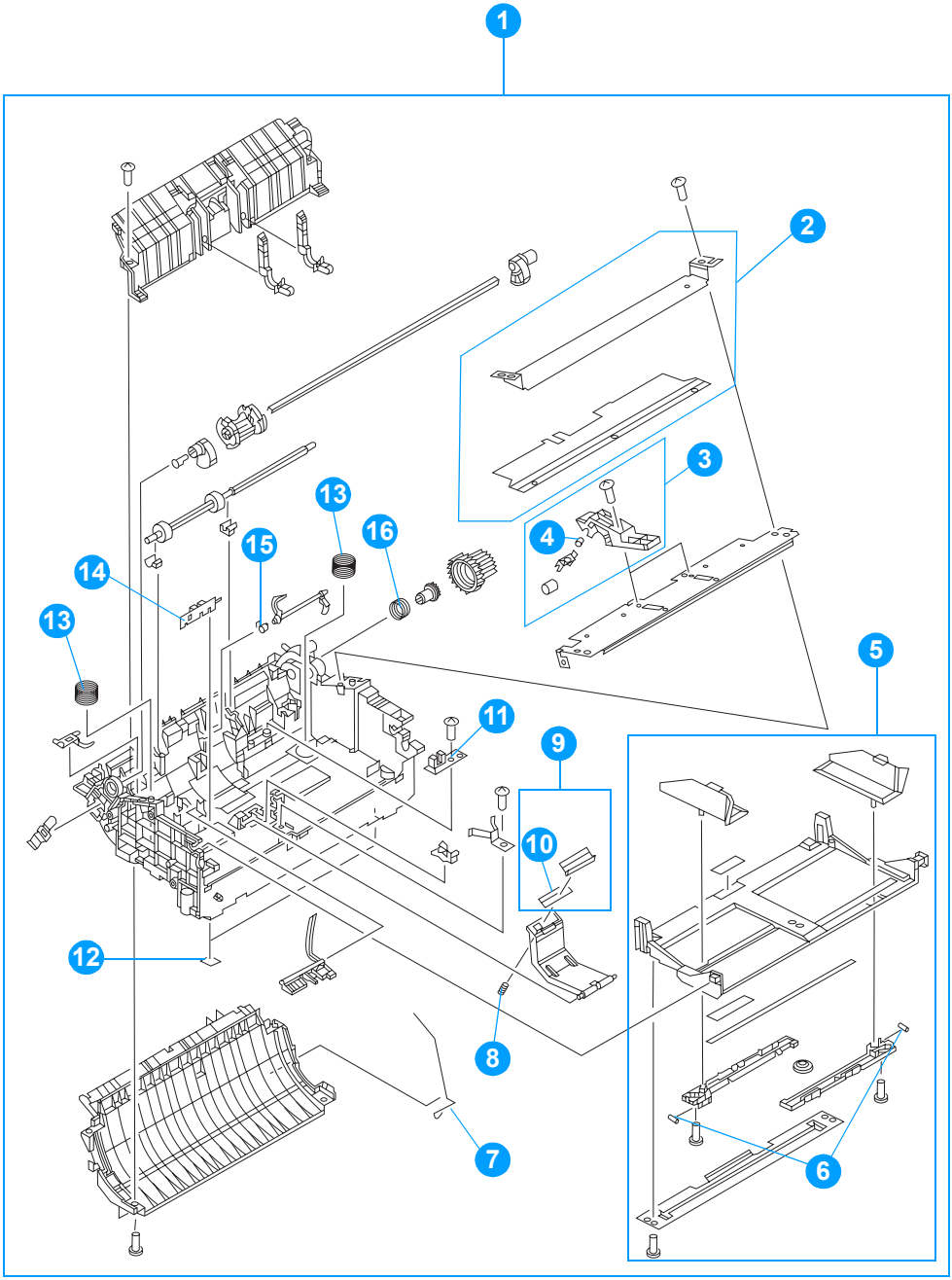


Figure 102. **Paper pickup assembly**

Part numbers

Table 30. Paper pickup assembly

Ref.	Part number	Description	Qty.
1	RM1-0531-000CN	paper pickup assembly	1
2	RM1-0533-000CN	paper pickup shaft assembly	1
3	RG0-1019-000CN	roller holder assembly	2
4	RA0-1152-000CN	spring, compression	1
5	RM1-0532-000CN	lifting plate assembly	1
6	RA0-1199-000CN	spring, compression	2
7	RC1-1792-000CN	spring, torsion	1
8	RA0-1060-000CN	spring, compression	1
9	RF0-1014-000CN	separation pad	1
10	RA0-1204-000CN	separation pad	1
11	RM1-0572-000CN	paper pickup sensor PCB assembly	1
12	RA0-1003-000CN	foot, rubber	2
13	RA0-1061-000CN	spring, compression	2
14	RM1-0574-000CN	paper sensor PCB assembly	1
15	RC1-1782-000CN	spring, torsion	1
16	RA0-1050-000CN	spring, compression	1

Paper feed guide assembly

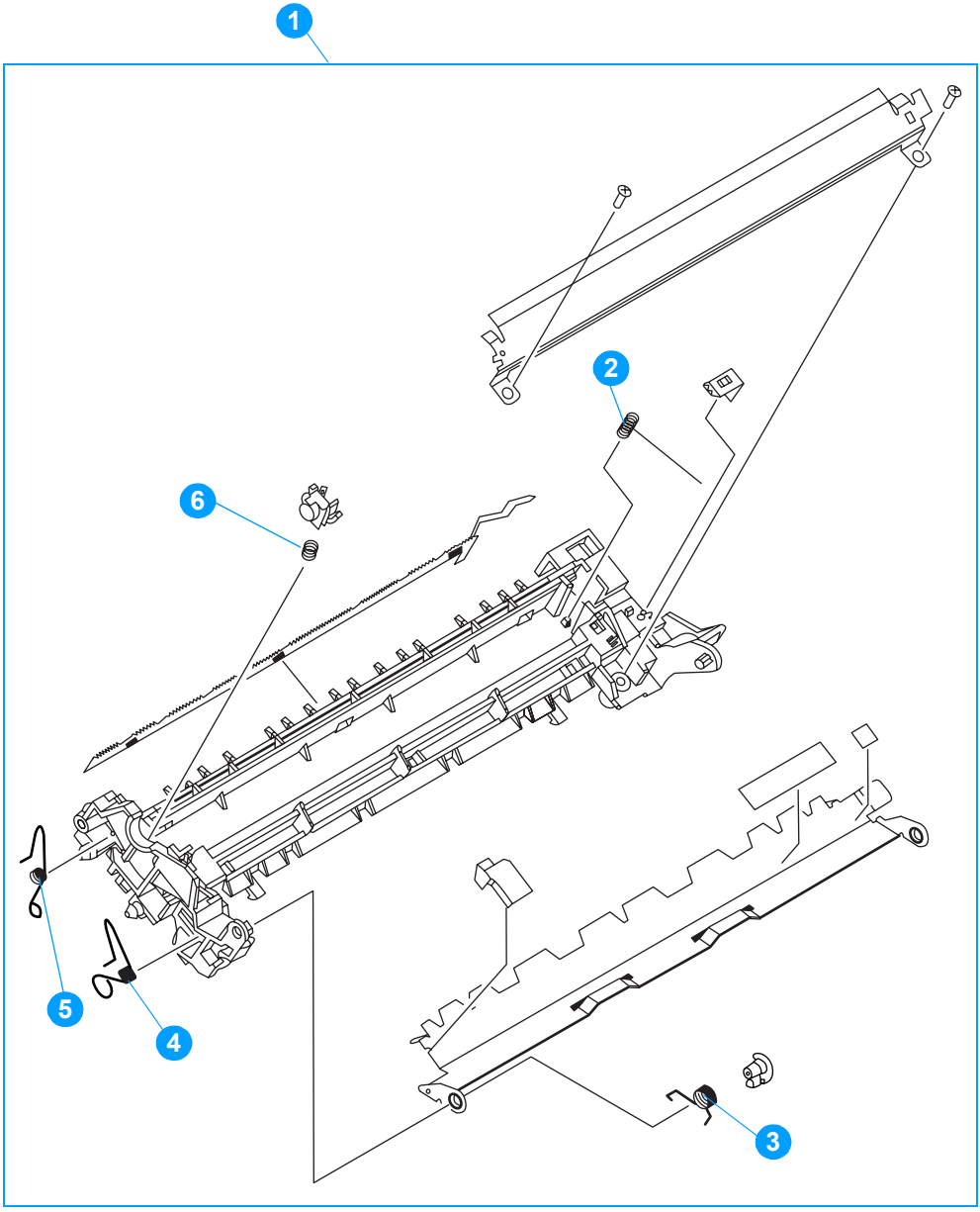


Figure 103. **Paper feed guide assembly**

Part numbers

Ref.	Part number	Description	Qty.
1	RM1-0530-000CN	paper feed guide assembly (HP LaserJet 1300)	1
	RM1-0721-000CN	paper feed guide assembly (HP LaserJet 1150)	1
2	RC1-1774-000CN	spring, compression	1
3	RC1-1773-000CN	spring, torsion (HP LaserJet 1300)	1
4	RA0-1035-000CN	spring, torsion	1
5	RA0-1200-000CN	spring, torsion	1

Fuser assembly

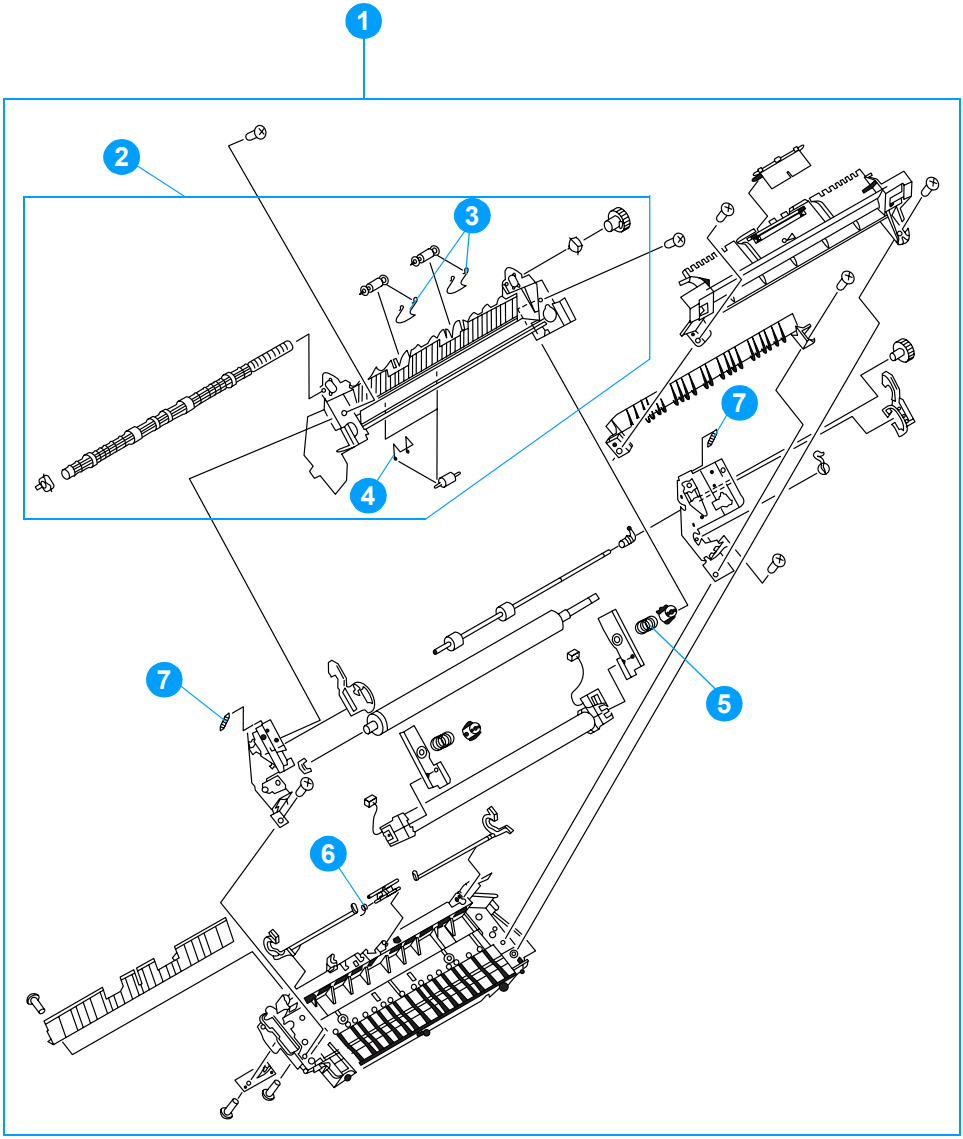


Figure 104. **Fuser assembly**

Part numbers

Table 31. Fuser assembly

Ref.	Part number	Description	
1	RM1-0535-000CN	fuser, 110 volt	1
	RM1-0536-000CN	fuser, 220 volt	1
2	RM1-0556-000CN	face-down paper delivery assembly	1
3	RA0-1116-000CN	spring, torsion	2
4	RA0-1115-000CN	spring, torsion	2
5	RU5-2140-000CN	spring, compression	2
6	RA0-1099-000CN	spring, torsion	1
7	RA0-1090-000CN	spring, tension	1

Alphabetical parts list

Table 32. Alphabetical parts list

Description	Part number	Ref.	Figure
cable, e-label (HP LaserJet 1300)	RM1-0571-000CN	17	97
cable, flat	RK2-0029-000CN	1	97
cable, scanner motor	RM1-0563-000CN	3	97
cap, cover, right (HP LaserJet 1150)	RC1-1852-000CN	4	96
control panel assembly	RM1-0549-000CN	8	95
		14	97
cover, front	RC1-1821-000CN	6	96
cover, left	RC1-1823-000CN	8	96
cover, rear assembly	RM1-0544-000CN	9	96
cover, right	RC1-1822-000CN	2	96
ECU, 110 volt (HP LaserJet 1150)	RM1-0566-000CN	9	95
		11	97
		1	101
ECU, 110 volt (HP LaserJet 1300)	RM1-0564-000CN	9	95
		11	97
		1	101
ECU, 220 volt (HP LaserJet 1150)	RM1-0567-000CN	9	95
		11	97
		1	101
ECU, 220 volt (HP LaserJet 1300)	RM1-0565-000CN	9	95
		11	97
		1	101
ESD shield (HP LaserJet 1300)	Q1334-00001	14	98
e-label contact assembly (HP LaserJet 1300)	RM1-0542-000CN	15	97
face-down paper delivery assembly	RM1-0556-000CN	2	104
fan assembly	RM1-0547-000CN	5	98
foot, rubber	RA0-1003-000CN	12	102
front guide assembly (HP LaserJet 1150)	RM1-0682-000CN	8	98
front guide assembly (HP LaserJet 1300)	RM1-0546-000CN	8	98
fuser, 110 volt	RM1-0535-000CN	1	95
		1	98
		1	104

Table 32. Alphabetical parts list (continued)

Description	Part number	Ref.	Figure
fuser, 220 volt	RM1-0536-000CN	1	95
		1	98
		1	104
gear, 29T	RA0-1088-000CN	2	98
gear, 41T (HP LaserJet 1300)	RC1-1755-000CN	6	100
gear, 69T	RA0-1176-000CN	4	98
gear, 87T/23T (HP LaserJet 1150)	RA0-1016-000CN	5	100
gear, 87T/23T (HP LaserJet 1300)	RC1-1752-000CN	5	100
input tray	RM1-0553-000CN	5	95
		7	96
input tray cover	RM1-0554-000CN	4	95
		5	96
laser/scanner assembly	RM1-0524-000CN	2	97
left side plate assembly	RM1-0528-000CN	13	97
		11	98
		1	99
lifting plate assembly	RM1-0532-000CN	5	102
link, connecting	RA0-1023-000CN	10	98
motor	RK2-0062-000CN	8	100
optional paper feeder connector assembly (HP LaserJet 1300)	RM1-0529-000CN	12	97
pan, ECU	RC1-1813-000CN	2	101
paper feed guide assembly (HP LaserJet 1150)	RM1-0721-000CN	7	95
		8	97
		1	103
paper feed guide assembly (HP LaserJet 1300)	RM1-0530-000CN	7	95
		8	97
		1	103
paper pickup assembly	RM1-0531-000CN	6	95
		10	97
		1	102
paper pickup gear assembly	RM1-0551-000CN	6	97
paper pickup sensor PCB assembly	RM1-0572-000CN	11	102
paper pickup shaft assembly	RM1-0533-000CN	2	102
paper sensor PCB assembly	RM1-0574-000CN	14	102

Table 32. Alphabetical parts list (continued)

Description	Part number	Ref.	Figure
plate, left rear	RA0-1185-000CN	12	98
plate, right rear	RA0-1186-000CN	3	98
print cartridge door assembly	RM1-0543-000CN	2	95
		3	96
right side plate assembly (HP LaserJet 1150)	RM1-0678-000CN	4	97
		7	98
		1	100
right side plate assembly (HP LaserJet 1300)	RM1-0527-000CN	4	97
		7	98
		1	100
roller holder assembly	RG0-1019-000CN	3	102
roller, paper pickup	RL1-0303-000CN	9	97
Screw kit (contains a full set of screws for the printer)	RY7-5082-000CN		
separation pad	RA0-1204-000CN	10	102
separation pad	RF0-1014-000CN	9	102
solenoid	RH7-5314-000CN	6	98
spring, compression	RA0-1012-000CN	3	100
spring, compression	RA0-1050-000CN	16	102
spring, compression	RA0-1060-000CN	8	102
spring, compression	RA0-1061-000CN	13	102
spring, compression	RA0-1152-000CN	4	102
spring, compression	RA0-1180-000CN	9	98
spring, compression	RA0-1199-000CN	6	102
spring, compression	RC1-1774-000CN	2	103
spring, compression	RU5-2140-000CN	5	104
spring, compression	RU5-2142-000CN	7	97
spring, compression (HP LaserJet 1300)	RU5-2141-000CN	18	97
spring, tension	RA0-1006-000CN	2	100
spring, tension	RA0-1090-000CN	7	104
spring, tension	RA0-1212-000CN	4	100
spring, tension (HP LaserJet 1300)	RU5-2143-000CN	16	97
spring, torsion	RA0-1026-000CN	7	100
spring, torsion	RA0-1035-000CN	4	103
spring, torsion	RA0-1099-000CN	6	104

Table 32. Alphabetical parts list (continued)

Description	Part number	Ref.	Figure
spring, torsion	RA0-1115-000CN	4	104
spring, torsion	RA0-1116-000CN	3	104
spring, torsion	RA0-1200-000CN	5	103
spring, torsion	RC1-1765-000CN	2	99
spring, torsion	RC1-1782-000CN	15	102
spring, torsion	RC1-1792-000CN	7	102
spring, torsion (HP LaserJet 1300)	RC1-1773-000CN	3	103
top cover assembly (HP LaserJet 1150)	RM1-0720-000CN	3	95
		1	96
top cover assembly (HP LaserJet 1300)	RM1-0552-000CN	3	95
		1	96
transfer roller assembly	RM1-0545-000CN	5	97

Numerical parts list

Table 33. Numerical parts list

Part Number	Description	Ref.	Figure
Q1334-00001	ESD shield (HP LaserJet 1300)	14	98
RA0-1003-000CN	foot, rubber	12	102
RA0-1006-000CN	spring, tension	2	100
RA0-1012-000CN	spring, compression	3	100
RA0-1016-000CN	gear, 87T/23T (HP LaserJet 1150)	5	100
RA0-1023-000CN	link, connecting	10	98
RA0-1026-000CN	spring, torsion	7	100
RA0-1035-000CN	spring, torsion	4	103
RA0-1050-000CN	spring, compression	16	102
RA0-1060-000CN	spring, compression	8	102
RA0-1061-000CN	spring, compression	13	102
RA0-1088-000CN	gear, 29T	2	98
RA0-1090-000CN	spring, tension	7	104
RA0-1099-000CN	spring, torsion	6	104
RA0-1115-000CN	spring, torsion	4	104
RA0-1116-000CN	spring, torsion	3	104
RA0-1152-000CN	spring, compression	4	102
RA0-1176-000CN	gear, 69T	4	98
RA0-1180-000CN	spring, compression	9	98
RA0-1185-000CN	plate, left rear	12	98
RA0-1186-000CN	plate, right rear	3	98
RA0-1199-000CN	spring, compression	6	102
RA0-1200-000CN	spring, torsion	5	103
RA0-1204-000CN	separation pad	10	102
RA0-1212-000CN	spring, tension	4	100
RC1-1752-000CN	gear, 87T/23T (HP LaserJet 1300)	5	100
RC1-1755-000CN	gear, 41T (HP LaserJet 1300)	6	100
RC1-1765-000CN	spring, torsion	2	99
RC1-1773-000CN	spring, torsion (HP LaserJet 1300)	3	103
RC1-1774-000CN	spring, compression	2	103
RC1-1782-000CN	spring, torsion	15	102
RC1-1792-000CN	spring, torsion	7	102

Table 33. Numerical parts list (continued)

Part Number	Description	Ref.	Figure
RC1-1813-000CN	pan, ECU	2	101
RC1-1821-000CN	cover, front	6	96
RC1-1822-000CN	cover, right	2	96
RC1-1823-000CN	cover, left	8	96
RC1-1852-000CN	cap, cover, right (HP LaserJet 1150)	4	96
RF0-1014-000CN	separation pad	9	102
RG0-1019-000CN	roller holder assembly	3	102
RH7-5314-000CN	solenoid	6	98
RK2-0029-000CN	cable, flat	1	97
RK2-0062-000CN	motor	8	100
RL1-0303-000CN	roller, paper pickup	9	97
RM1-0524-000CN	laser/scanner assembly	2	97
RM1-0527-000CN	right side plate assembly (HP LaserJet 1300)	4	97
		7	98
		1	100
RM1-0528-000CN	left side plate assembly	13	97
		11	98
		1	99
RM1-0529-000CN	optional paper feeder connector assembly (HP LaserJet 1300)	12	97
RM1-0530-000CN	paper feed guide assembly (HP LaserJet 1300)	7	95
		8	97
		1	103
RM1-0531-000CN	paper pickup assembly	6	95
		10	97
		1	102
RM1-0532-000CN	lifting plate assembly	5	102
RM1-0533-000CN	paper pickup shaft assembly	2	102
RM1-0535-000CN	fuser, 110 volt	1	95
		1	98
		1	104
RM1-0536-000CN	fuser, 220 volt	1	95
		1	98
		1	104
RM1-0542-000CN	e-label contact assembly (HP LaserJet 1300)	15	97

Table 33. Numerical parts list (continued)

Part Number	Description	Ref.	Figure
RM1-0543-000CN	print cartridge door assembly	2	95
		3	96
RM1-0544-000CN	cover, rear assembly	9	96
RM1-0545-000CN	transfer roller assembly	5	97
RM1-0546-000CN	front guide assembly (HP LaserJet 1300)	8	98
RM1-0547-000CN	fan assembly	5	98
RM1-0549-000CN	control panel assembly	8	95
		14	97
RM1-0551-000CN	paper pickup gear assembly	6	97
RM1-0552-000CN	top cover assembly (HP LaserJet 1300)	3	95
		1	96
RM1-0553-000CN	input tray	5	95
		7	96
RM1-0554-000CN	input tray cover	4	95
		5	96
RM1-0556-000CN	face-down paper delivery assembly	2	104
RM1-0563-000CN	cable, scanner motor	3	97
RM1-0564-000CN	ECU, 110 volt (HP LaserJet 1300)	9	95
		11	97
		1	101
RM1-0565-000CN	ECU, 220 volt (HP LaserJet 1300)	9	95
		11	97
		1	101
RM1-0566-000CN	ECU, 110 volt (HP LaserJet 1150)	9	95
		11	97
		1	101
RM1-0567-000CN	ECU, 220 volt (HP LaserJet 1150)	9	95
		11	97
		1	101
RM1-0571-000CN	cable, e-label (HP LaserJet 1300)	17	97
RM1-0572-000CN	paper pickup sensor PCB assembly	11	102
RM1-0574-000CN	paper sensor PCB assembly	14	102
RM1-0678-000CN	right side plate assembly (HP LaserJet 1150)	4	97
		7	98
		1	100

Table 33. Numerical parts list (continued)

Part Number	Description	Ref.	Figure
RM1-0682-000CN	front guide assembly (HP LaserJet 1150)	8	98
RM1-0720-000CN	top cover assembly (HP LaserJet 1150)	3	95
		1	96
RM1-0721-000CN	paper feed guide assembly (HP LaserJet 1150)	8	97
		1	103
		7	95
RU5-2140-000CN	spring, compression	5	104
RU5-2141-000CN	spring, compression (HP LaserJet 1300)	18	97
RU5-2142-000CN	spring, compression	7	97
RU5-2143-000CN	spring, tension (HP LaserJet 1300)	16	97
RY7-5082-000CN	Screw kit (contains a full set of screws for the printer)		

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